# दिल्ली प्रौद्योगिकी विश्वविद्यालय Delhi Technological University



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

# 8 वाँ वार्षिक प्रतिवेदन

(1 अगस्त, 2021 - 31 जुलाई, 2022) (1 August, 2021 - 31 July, 2022)





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



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राज निवास दिल्ली-११००५४ RAJ NIWAS DELHI-110054



विनय कुमार सक्सेना उपराज्यपाल Vinai Kumar Saxena Lt. Governor

#### **MESSAGE**

I am glad to learn that Delhi Technological University (DTU) is publishing its Annual Report for the Academic Year 2021-2022. The resilience and ingenuity displayed by DTU during the COVID pandemic, and the resulted achievements are admirable.

DTU (Erstwhile Delhi College of Engineering) has a remarkable past of more than 81 years in the field of education, technology, innovation and research. It has, over the years, provided a large number of skilled and motivated young graduates capable of contributing to society and nation-building, and continues to do so. I am also happy to learn that DTU has signed various MoUs with institutions of national and international repute, and the board of management is taking progressive decisions to set new benchmarks.

I convey my heartiest congratulations and warm wishes to the entire DTU family on this occasion and wish them the very best in their future endeavours.

(Vinai Kumar Saxena)



# ARVIND KEJRIWAL CHIEF MINISTER



GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI-110002 PHONE - 23392020, 23392030 FAX - 23392111



D.O. No.: OSDCMI/91 Date: 27/09/2022

#### **MESSAGE**

I am very pleased and delighted that Delhi Technological University (DTU) is publishing its Annual Report for the Academic Year 2021-2022. I extend my best wishes to all the stakeholders on this occasion for their spectacular achievements during the past year.

Education plays a vital role in economic and cultural growth of a nation which provides a framework for the development of the nation. Universities like DTU are helping the nation in opening up new horizons for achieving globalization at greater levels. The advancing technologies through achievements at DTU in the area of innovation and research stand a witness in the last few years consistently. In a developing nation like ours, true development can only be achieved by educating the youth of the nation by motivated and skilled faculty, so as to develop skilled and trained intellectuals who May, bear the responsibility of shaping new direction for development of the nation.

I am extremely delighted to be a witness to the significant and constant growth of DTU over the past few years. DTU has provided and atmosphere where students can adapt and learn through various innovative and transformative methods to learn and educate themselves and their peers. The approach of the university towards our society and nation is very positive and conducive, thereby enabling betterment of all.

I congratulate the vice-chancellor and his entire team involved in the compilation of this report. I wish and hope a successful future for the faculty members, staff and the students of DTU.

(Arvind Kejriwal)



#### MANISH SISODIA मनीष सिसोदिया





DEPUTY CHIEF MINISTER GOVT. OF NCT OF DELHI उप मुख्यमंत्री, दिल्ली सरकार DELHI SECTT, I.P. ESTATE दिल्ली सचिवालय, आई०पी०एस्टेट, NEW DELHI-110002 नई दिल्ली-110002

Email: msisodia.delhi@gov.in

D.O. No. DycM|2022|477 Date: 20|09|2022

#### **MESSAGE**

As Delhi Technological University publishes its Annual Report for the year 2021-22, I am immensely delighted to be a witness to yet another year of new milestones and achievements at Delhi Technological University in its journey towards success. This day was made possible only because of the perseverance, grit and tireless efforts of all the stakeholders. I am sure all the faculty members, staff, students and their families are extremely proud to be a part of this eminent university.

Being able to witness the process of morphing each student at Delhi Technological University into skilled, qualified and well-rounded professionals by overcoming various difficulties has been a matter of immense pride for me. I hope each student is able to carry forward the learning and achievements of this year to help them design their vision and contribution to a new and better world. This great nation and its development is our collective and mandatory responsibility. I hope we all go out and beyond with our hearts, knowledge and skills to achieve the same.

I congratulate all the stakeholders of DTU involved in the compilation of the Annual Report. I hope for an immensely successful future of all the faculty members, staff and students of the university.

(Manish Sisodia)



# R. Alice Vaz, IAS Secretary





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, नजदीक टी.वी. टावर, Muni Maya Ram Marg, Near T.V. Tower पीतम पुरा, दिल्ली.110034 Pitam Pura, Delhi-110034

Email: pstechedu@nic.in

Tel. No. 20871208

D.O. NO.: PS SECY/TTE/2022/133

दिनांक:

Date: 15.09.2022

#### **MESSAGE**

Heartiest congratulations to all members and stakeholders of Delhi Technological University for bringing out its Annual Report for the Academic Year 2021-2022.

Delhi Technological University is a premier institution in the service of the nation since generations. It has groomed countless students to be quality engineers, administrators and management tycoons. Each alumni has serviced the community with dedication, hard work and professional prowess. They have been a dominant force in multiple domains all over the world. I believe the responsibility to uphold the invaluable legacy of Delhi Technological University lies not only with those who have graduated in the past, but also with those who are graduating today, and those who will graduate in the future. I am sure that the future alumni will surpass the expectations of all stakeholders and add more glory to the institution.

I congratulate the Vice-Chancellor and his team in the compilation of the Annual Report. I wish the efforts of the faculty member, staff and students will take this esteemed university to newer heights.

(Ms. R. Alice Vaz) Commissioner-cum-Secretary





#### **VISITOR**

# Her Excellency SMT. DROUPADI MURMU

**President of India** 



#### **CHANCELLOR**

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



Shri Arvind Kejriwal Hon'ble Chief Minister Govt. of NCT, Delhi



Shri Manish Sisodia
Hon'ble Deputy Chief Minister
and Minister for Education
Govt. of NCT, Delhi



### **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.



#### **DELHI TECHNOLOGICAL UNIVERSITY**

# 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.





# Strengthening Education

Flexible Curriculum

Outcome-based education

Focus on research, innovation & Entrepreneurship

Projects and Experiments based learning



# Product Development & Entrepreneurship

Incubation & Innovation Foundation

Product
Development &
Entrepreneurship

Track introduced in UG curriculum



# Collaboration & Creativity

Research Excellence Award & Grants for researchers

MoUs with leading industries and universities

Research Track introduced in UG & PG Curriculum



#### **Ethics & Integrity**

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



# **HISTORICAL BACKGROUND**

Delhi Technological University (DTU) is a non affiliating teaching and research university located in Delhi. It is dedicated towards achievement of excellence in science, engineering, technology, management, and allied areas. The university exposes each of its students to the wide range of changes that are happening every day in the field of science, technology, management, and environment. The different activities that a student is subjected to involves; aspects of innovation, design, development, construction, production, management, and entrepreneurship. Along with the developing technical and managerial skills, special attention is given to developing soft skills such as a sense of national identity, self-confidence, and leadership skills. Additionally, the university lays special emphasis on fostering an ecosystem conducive for development of creativity and out of the box thinking.

The university has an illustrious history spanning over 81 years. It was originally established in 1941 as Delhi Polytechnic; thereafter in 1965 it was renamed as Delhi College of Engineering, which was eventually reconstituted to Delhi Technological University in 2009 by Government of NCT of Delhi vide Act 6 of 2009.

The latest addition to the university is its East Delhi Campus, which has been functional since the academic year 2017-2018. This new East Delhi campus is located in Vivek Vihar, Phase II, Delhi. This campus is dedicated towards providing high quality education in the area of management and entrepreneurship with a well-rounded focus on research and innovation as well.

DTU is an established premier institution globally acclaimed for its high education standards, research quality, and innovation. Presently, the university offers diverse range of courses which are interdisciplinary and industry relevant. These different programs are offered at both undergraduate and post-graduate levels in the fields of science, technology, management, and allied areas. The university is dedicated in creating new avenues for student growth through strong industry-academia partnership and collaborations with premier research institutions worldwide. The diverse alumni of the university ingrained in service of society at national and international platforms stand a witness to the same. These revered members of the DTU family have added high accolades, honor, and glory to entire engineering fraternity. It is thus a collective contribution of all these factors that DTU has become a highly preferred choice for the top ranking meritorious students in the country. It is an implication of its illustrious history, strong and globally spread alumni, and profound contributions to growth of quality human capital and a technologically vibrant campus that DTU is ranked amongst the top premier university of technology.

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#### **PROGRAMS**

# B. TECH PROGRAMS

#### M. TECH. PROGRAMS

# OTHERS PROGRAMS

- Chemical Engineering
- Mathematics and Computing
- Engineering Physics
- Biotechnology
- Civil Engineering
- Civil Engineering (Cont. Edu.)
- Computer Engineering
- Software Engineering
- · Electrical Engineering
- Electrical Engineering (Cont. Edu.)
- Electronics & Communication Engineering
- Electronics & Communication Engineering (Cont. Edu.)
- Environmental Engineering
- Information Technology
- Mechanical Engineering
- Production & Industrial Engineering
- Mechanical Engineering with Specialization in Automotive Engineering
- Mechanical Engineering (Cont. Edu.)

- Bioinformatics
- Industrial Biotechnology
- Geotechnical Engineering
- Hydraulics & Water Resources Engineering
- Structural Engineering
- Geoinformatics
- Computer Science & Engineering
- · Artificial Intelligence
- Software Engineering
- Data Science
- Information System
- Microwave & Optical Communication Engineering
- Signal Processing & Digital Design
- VLSI Design and Embedded System
- Control & Instrumentation
- Power System
- Power Electronics and Systems
- Environmental Engineering
- Production Engineering
- · Thermal Engineering

- BBA
- BA-Economics (Hons.)
- B. Des.
- MBA Innovation, Entrepreneurship and Venture Development
- MBA Business Analytics
- Master of Business Administration (USME)
- MBA Family Business & Entrepreneurship
- Master of Business Administration (Executive)
- Master of Business Administration (MBA)
- · M.Sc. Biotechnology
- M.Sc. Chemistry
- M.Sc. Mathematics
- · M.Sc. Physics

# DTU AT A GLANCE

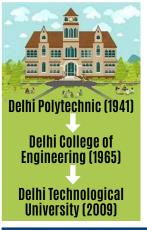


**Times Engineering** Institute Ranking a

TIMES ENGINEERING

35 **NIRF Ranking** 

601-800 **Times Higher Education World University Ranking** 





4347

UG **Student Enrolled** 2021-22

PG **Student Enrolled** 2021-22

Ph.D. Research **Scholar Enrolled** 2021-22

3196

**870** 

281

**2752** | B.Tech

167 BBA

162 **BA (Economics)** 

115 B. Design 308 M.Tech

312 MBA

209 M.Sc.

M.Des.

**Academic Departments** 16

**20 Centers & Other Units** 

12 **Central Facilities**  3182

Number of

**Degrees Awarded** 54

2413 UG PG



**321** 

**Faculty Members** 198

**Non-Academic Members** 



**Professor** 

**Associate Professor** 



164 **Assistant Professor** 



Ph.D.

**12 Others** 





JOB OFFER

Interships: 712 Job Offers: 2445



Highest Package: 1.84 Crore Avergae Package: 15.24 LPA

**Grants** Govt. of NCT, Delhi Grant In Aid (GIA): **Rs 53 crores**  **Consultancy Projects** 

Number of Projects: 50 Outlay: Rs 991.32.454

**Sponsored Research Projects** 

Number of Projects: 4 Outlay: **Rs 111,57,485** 



**Entrepreneurship Cell** 





**Sports Council** 

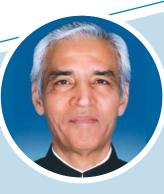
**National Service Scheme** 

**Workshop on Road Safety** 9th March 2022 **CPR Traning** 20th April, 2022

# **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. Pradeep Kumar Aug. 2014 to Sept. 2015



Prof. Yogesh Singh Sept. 2015 to Oct. 2021



Prof. J. P. Saini Oct. 2021 to till date



Delhi Technological University (Erstwhile Delhi College of Engineering) has a splendorous past of more than 81 years and is widely renowned for its excellence in technical education, research & training. The university has an exemplary journey - starting from Delhi Polytechnic to Delhi College of Engineering and eventually Delhi Technological University. The autonomy granted to the university has fueled its progress in several new territories. The significant advancements in different fields in the university has helped it remain young and energetic towards achieving academic excellence.

The university has a glorious past of over 81 years, and ever since its inception, it has been providing technical education with modern and adaptable educational infrastructure. DTU as an institution continues to deliver significantly in the fields of Science, Technology and Management. It has a well-established network of industrial, academic and scientific community personnel and groups. Furthermore, the research and academic diversity at campus has helped establish partnerships with leading universities and industries within the country & abroad. DTU has a highly distinguished pool of world class engineers and technologists as its alma mater including Ashok K. Baweja (Head, Quest Global Defence Engineering Services), Mr. Promod Haque, the world's most widely acclaimed Venture Capitalist, the 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 Avionics wizard of US & 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 always ensured highest quality in education, technology, research and innovation and this commitment has earned us a high reputation in the country and abroad as well. The high academic ranking of DTU and its categorization among the top engineering institutions in the country, along with the prestigious IITs and other renowned institutions is a corroboration of the same. The university is keen on maintaining its premier status and consequentially has taken different initiatives towards restructuring

and strengthening its undergraduate and postgraduate programmes. Another factor that has earned DTU its place amongst premier institutions is its emphasis on research and development, and regular introduction of new programs at the postgraduate level to keep its students updated with the market and industry trends. These attributes make DTU one of the most sought-after destinations for undergraduate and postgraduate studies; attracting top performers in national examinations like JEE (Mains) and GATE.

The university has built its reputation by consistently catering to the requirements of students, society, and industry. It is our primal goal at DTU to shape all our students into knowledgeable, trained and innovative professionals, who have the capability to work relentlessly in service of the nation. The work ethics and technical prowess nurtured into our students during their formative years in the university helps transform them into assets for the nation. We are dedicated towards progress and are attempting to keep pace with the growing skill set and knowledge bank in the field of science and technology. The student strength has seen a significant uphill as the intake capacity for the university has increased. The university is reorienting itself academically, technologically and administratively, in response to the increasing students on campus. We see it as a great opportunity to retain our leadership in engineering education in the country. The engineering curriculum for undergraduate program is designed to add rigor, analytical thinking, and problem solving into everyday teaching. The aim is to intellectually challenge students to inculcate out of the box thinking. The university currently offers 14 B.Tech., 25 M.Tech., 4 M.Sc., M.B.A., B.Des., 4 B.Tech. (Evening), B.B.A., B.A. (Economics), M.B.A. (Business Analytics), Executive M.B.A. and Ph.D. programs. To keep up with the growing start-up trend and fulfil the demand for young innovators and entrepreneurs, DTU has established its East Delhi Campus in Vivek Vihar. The new programs added to the East Delhi campus are M.B.A. Innovation, Entrepreneurship & Venture Development and M.B.A. Family Business & Entrepreneurship. Nurturing young students to become well-rounded and professionally sound individuals is DTU's way of contribution in nation building. These programs boost and enhance a student's entrepreneurship skills by providing them facilities and opportunities.

#### **Admissions**

The admission for B.Tech. Programmes at Delhi Technological University in the academic year 2021-22 were held through common counselling - Joint Admission Counselling (JAC). The other institutions that participate in JAC along with DTU are - Netaji Subhash University of Technology (NSUT), Indraprastha Institute of Information Technology, Delhi (IIITD), Indira Gandhi Delhi Technical University for Women (IGDTUW) and Delhi Skill and Entrepreneurship University (DSEU). During the admission process for B.Tech., 2512 students were admitted through JAC. The admission for the International Students of PIO/FN/NRI category were conducted through DASA and 125 students were admitted this year. A total of 10 students were admitted under PMSSS in B.Tech. 15 students admitted through lateral entry and 90 students were admitted in B.Tech. under continuing education. A total of 167 students were admitted in BBA, 162 in BA-Economics (Hons.), and 115 in B. Des. Thus, in the academic year 2021-22, a total of 3196 undergraduate students were admitted. Whereas, 308 students were enrolled in M.Tech., 312 in MBA, 209 in M.Sc and 41 in M.Des. The total postgraduate enrolment for 2021-22 is 870. While, 281 new Ph.D.

scholars were added to its research community. All Post graduate and Ph.D. students involved in research are given the opportunity to interact with the research community at the National and International level by providing financial support to attend International/National Conferences by DTU.

#### **Training And Placement**

Delhi Technological University has always been focused on providing brightest minds to the leading industries of the country. This year DTU entered the placement season with great enthusiasm and confidence. The process began in June, 2021 by sending invitations to companies to visit the university for pre-placement talk and announcement of job profiles seeked by them. The talks provided a platform to the students for interaction and familiarization with the recruiting organizations and their expectations. Students from different branches and specializations in B.Tech. M.Tech., MBA programs took part in the placement process. In the academic year 2021-22, a total of 395+ recruiters participated in campus placements and offered 2445 jobs to B.Tech., M.Tech. MBA, B.Tech.(E), BBA/BAE and M.Sc. programs. The highest salary package of 1.84 Crores was offered by Palantir for the academic year 2021-22. The average package for this academic year was 15.24 LPA and 712 students received internship and field training offers. In addition, various other students who passed out of DTU are presently studying at various prestigious National and International institutes such as IIMs, IITs, Georgia Institute of Technology, University of Pennsylvania, Columbia University, Worcester Polytechnic Institute, Duke University, Purdue University and Technical University of Munich to name a few.

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

People from industry, academia and from our own faculty are keenly interested in activities such as Continuing Education Programme (CEP), Quality Improvement Programme, Curriculum Development Programme and Faculty Development Programme (FDP). In keeping with the challenging industry scenario, CEP courses are designed for working professionals to upgrade their skill set. Another set of programs that are highly popular amongst faculty members and budding academicians are FDPs. FDPs also increase the level of interaction between industry professionals and teachers.

#### **Faculty Centric Policies**

Professional Development Fund Grant is offered to the faculty members, with 2.25 Lacs every three years for attending conferences, workshops and training programs. Career Advancement Scheme is operational for promotions of faculty members. Various awards for Excellence in Teaching were given to the faculty. Additionally, the university offers three categories of awards annually for promotion of research.

#### **DTU Innovation and Incubation Foundation**

The industry at present is focusing on intellectual property and innovation skill set. To cater to the same, the university has set up Innovation and Incubation Foundation at DTU. The foundation aims to facilitate the creation of conducive environment for start-ups, entrepreneurial projects, and intellectual property creation. The eventual target for the same is employment generation, value creation and social reformation.

#### **Outreach and Extension**

DTU has established the Centre for "Extension and Field Outreach" in April 2018. The aim of the Centre is to promote a meaningful and sustained rapport between the University and the community. DTU has shown its commitment towards two important pillars of University Education i.e. Teaching and Research. These days, the university is working hard on third pillar of University Education i.e., Society. DTU is reaching out to different sections of the society particularly to the deprived segments of the society, through its different activities. DTU students (UG/PG/Ph.D.) are conducting classes in government schools. Resultantly overwhelming response have come out and the interest of school students towards science stream has also increased. Exploring Engineering and Open House programs for students of classes Xth to Xllth has been very successful in shaping out and selecting the correct stream for their higher education.

DTU has adopted 5 villages namely Barwala, Shahbad Daulatpur, Siraspur, Bhalswa Jahangir Pur and Prahladpur Bangar under Unnat Bharat Abhiyaan (UBA), a project launched by MHRD, Govt. of India. Under these projects, DTU is conducting academic and social activities for people of these villages. DTU is committed to impart education to underprivileged sections of the society. If these sections cannot avail education, then education must reach to them. With this vision, DTU has started a project, "Lab on Wheels" with the tag line:

#### "EDUCATION REACHES TO YOU"

Lab on Wheels is a customized bus and is studded with approximately 17 computers, two big size TVs, one 3D Printer, ACs, cameras and one common use printer. It is visiting various schools of Govt. of NCT of Delhi for imparting basic computer knowledge through certification-based Computer Courses run by DTU. The resource person for these activities are the students of DTU who are working under mentorship of faculty coordinator and Centre for Extension and Field outreach.

#### **Cultural, Sports, Technical and Literature Festivals**

Along with strong academic and research front, DTU also has a rich culture of sports and technical activities. Multiple events are organized at regular intervals for student engagement. The Entrepreneurship Cell of Delhi Technological University organized its annual 'E-Summit' sponsored by Havells, Bosch, Paxful, and Hell Energy from 8th to 10<sup>th</sup>, April, 2022. The event gave an opportunity to nascent start-ups to seek advice and guidance from like-minded individuals in the business world. This helps them lay a strong foundation to build upon for their future ventures. The Sports Council of DTU organized "Arena" for the students of DTU from 25<sup>th</sup> to 27<sup>th</sup> Feb, 2022 at the DTU Sports Complex. Physical fitness is essential for the overall personality development. The busy student life and the hectic schedules tend to shift their focus away from physical fitness. The idea behind organizing different sports event is to charge up the students and make them involved in different sports activities. To establish a meaningful link between campus and community, the National Service Scheme (NSS) was started at DTU. The NSS DTU chapter helps in increasing the student interaction with community thereby, adding a higher

<sup>&</sup>quot;शिक्षा आप के पास"

dimension to their think tank. It has organized a seminar on 9<sup>th</sup> March, 2022 to raise awareness and educate about various road safety practices that one must follow. It also organized a workshop in collaboration with Vijay Foundation (founded by DTU Alumnus) on Basic Life Support Training. The workshop equipped the students with high quality Cardiac Pulmonary Resuscitation (CPR) Training in April, 2022.

#### **DTU Rankings**

Delhi Technological University has been ranked 1st by Times Engineering Institute Ranking 2022. The NIRF Engineering rankings placed DTU at the 35th position in 2022. DTU is placed in the bracket of (601-800) in Times Higher Education World University Ranking, 2022, 2nd in ARIA ranking. The university has been with accredited "A" grade by NAAC. The university through Internal Quality Assurance Cell (IQAC), has initiated many activities for quality improvements such as ISO 9001:2015 certification, regular audit of processes as per standing operating procedures, Question paper standardization and audit, feedback collection and analysis, green audit of the campus, ERP & e-governance application in the processes etc.

Delhi Technological University is highly grateful to GNCTD, MOE, DST, AICTE, UGC, CSIR, DBT and DRDO for the financial support provided over the years. I extend my sincere thanks to all the faculty members, employees, students and alumni for their hard work and perseverance that they have invested in making DTU a premier university. DTU has always contributed significantly towards providing excellent technical education to the youth of the country and will strive to out-do itself in the coming years. I am highly grateful to the Hon'ble Chancellor, Shri Vinai Kumar Saxena, Lieutenant Governor of NCT of Delhi, Hon'ble Chief Minister, Shri Arvind Kejriwal, Hon'ble Deputy Chief Minister and Minister of Education Shri Manish Sisodia, for their support, time, cooperation, and guidance. I extend my heartiest gratitude towards Chief Secretary, Principal Secretary (Finance), Secretary (Training and Technical Directorate of Education) and Director DTTE, Govt. of NCT of Delhi for their support and cooperation in the growth of DTU as a premier institution. I also extend my gratefulness towards the Members of the Board of Management, Finance Committee, Planning Board, Academic Council and other Committees of DTU for their commendable contribution due to which DTU is able to achieve its mission. I compliment the editorial team of IQAC for their unparalleled efforts which were invested in compiling this report.

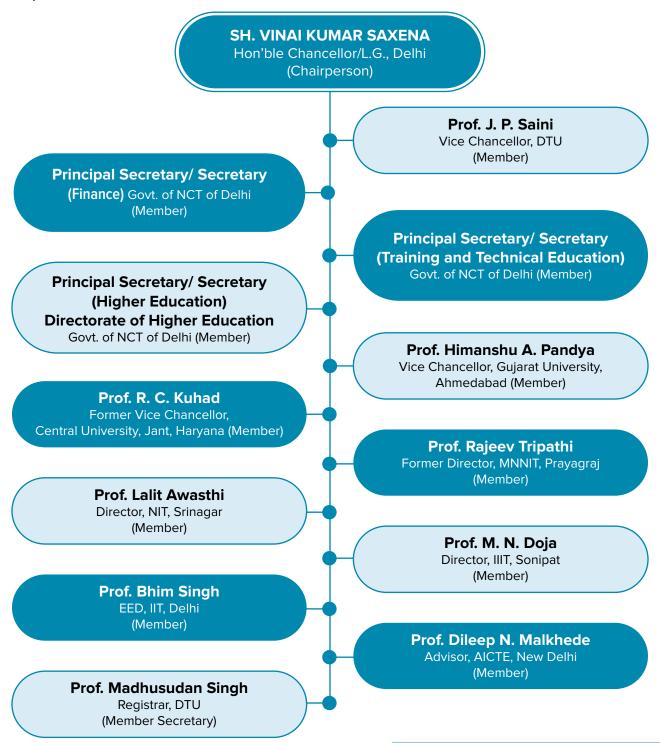
> **Prof. J. P. Saini** Vice Chancellor



### **1 Organization and Administration**

#### **1.1 University Court**

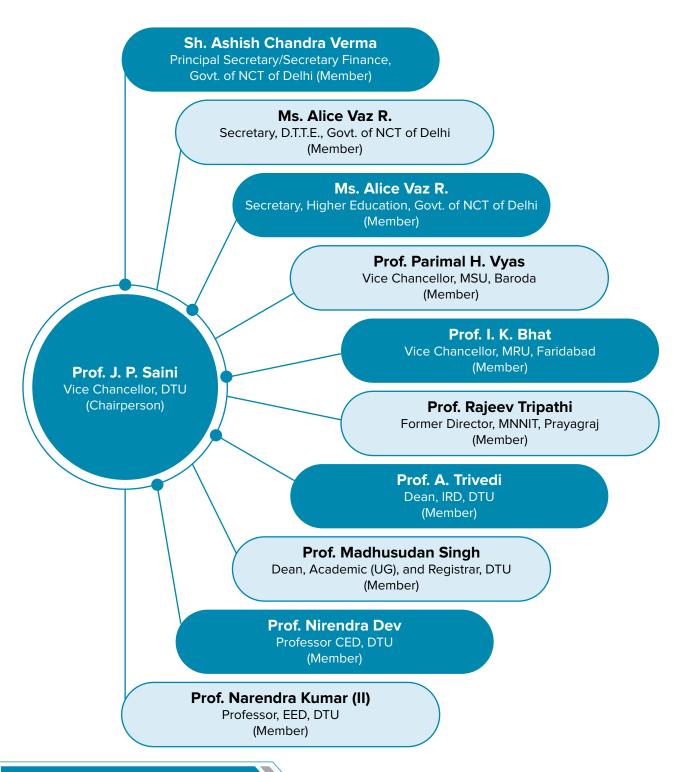
The University Court reviews from time to time, the broad policies and programmes of the university and suggest measures for the improvement and development of the university. The Court also considers the annual report, annual accounts of the university and the report of its auditors on such accounts.



1. ORGANIZATION AND ADMINISTRATION

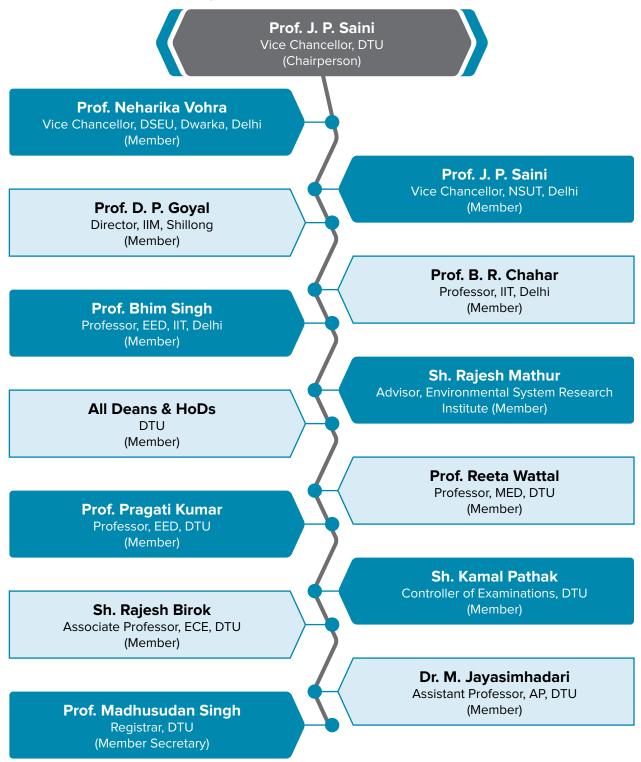
#### 1.2 Board of Management

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.



#### 1.3 Academic Council

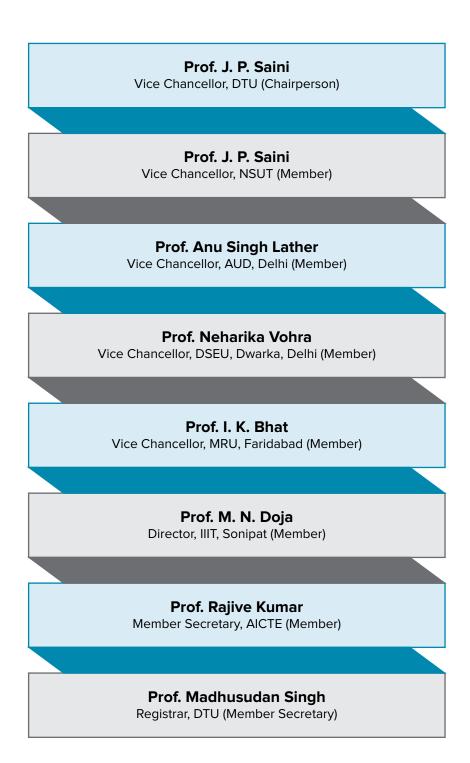
The Academic Council is the principal academic body of the University. It regulates the maintenance of standards of instruction, education, research and examination within the University and exercise such other powers and perform such other duties as may be conferred or imposed upon it by the Act and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



1. ORGANIZATION AND ADMINISTRATION

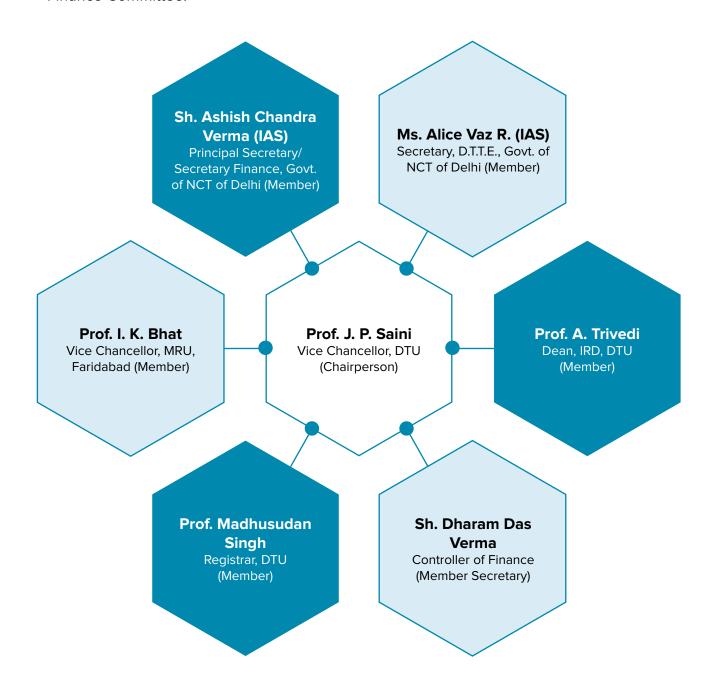
#### 1.4 Planning Board

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.



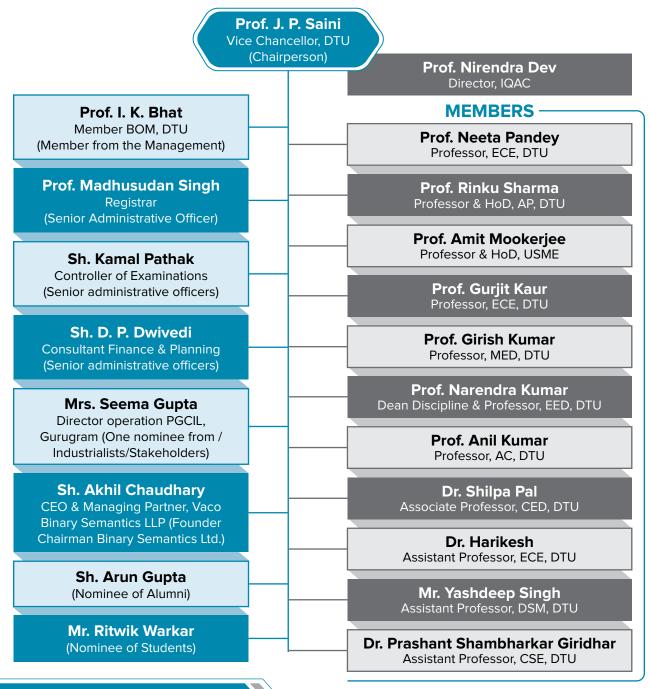
#### 1.5 Finance Committee

The Finance Committee develops financial policies of the University and oversees the revenues and expenditures of the University (It recommends 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.



#### 1.7 DTU Administration



Prof. Jai Prakash Saini Vice-Chancellor



Prof. Madhusudan Singh Registrar



Prof. Madhusudan Singh Dean, Academics (UG)



Prof. A. Trivedi Dean, Industrial Research & Development



Prof. Vishal Verma Dean, International Affairs



Prof. Narendra Kumar II

Dean, Student Discipline

Prof. Rajesh Rohilla Dean, Alumni Affairs



Prof. S Indu Dean, Student welfare



Prof. A. K. Shrivastava Dean, Outreach & **Extension Activities** 



Prof. Nirendra Dev Dean, Planning & Consultancy



**Prof. Dinesh Kumar** Recruitment Cell



Prof. Nirendra Dev



Prof. S. Anbu Kumar **HRDC** 



Prof. Rachana Garg **Equal Opportunity Cell** 





Prof. R. C. Singh Prof. A. K. Srivastava ----- Sport ----

#### **ADMINISTRATION**

#### **Head of Department**

# **Prof. S. G. Warkar** Applied Chemistry

**Prof. S. Sivaprasad Kumar**Applied Mathematics

Prof. Rinku Sharma Applied Physics

**Prof. Pravir Kumar**Bio Technology

Prof. Rajni Jindal Comp. Sci. (1 Aug. 2021 to 31 Dec. 2022)

**Prof. Vinod Singh**Comp. Sci. (1 Jan. 2021 to till date)

**Prof. V. K. Minocha**Civil Engg.

**Dr. Archana Singh**Delhi School of Management

**Dr. Ranganath. M. Singari** School of Design

**Prof. N. S. Raghava** Elec. & Comm. Engg.

**Prof. Uma Nangia** Electrical Engg.

Prof. S. K. Singh Environmental Engg.

Prof. Nand Kumar Humanities

**Prof. Kapil Sharma** Information Technology

**Prof. S. K. Garg**Mechanical Engineering

**Prof. Ruchika Malhotra** Software Engg.

Prof. Amit Mookerjee USME

**Prof. Naokant Deo** B.Tech. Evening

# Associate Dean & Associate Director

**Prof. Rajeshwari Pandey** Associate Dean, UG

> Prof. Rishu Chaujar Associate Dean, PG

Prof. Munendra Kumar Associate Dean, Planning & Consultancy

Prof. Ruchika Malhotra Associate Dean, IRD

**Prof. Yasha Hasija** Associate Dean, Alumni Affairs

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

**Prof. Roli Panwar** Associate Dean, International Affair

**Prof. Dinesh Vishwakarma**Associate Dean, Student Discipline

**Dr. Shilpa Pal** Associate Director, IQAC

**Dr. Vinod Singh** Associate Director, HRDC

#### **Others**

# Sh. Kamal Pathak Controller of Examinations

Mr. Daram Das Verma Controller of Finance (8 Dec. 2021 to 4 Aug. 2022)

Ms. Divya Narayan Chief Operating Officer

**Prof. A. K. Gupta** Chief Vigilance Officer

**Dr. Ravinder Kaushik**Deputy Registrar (Establishment,
Legal, PGMS), PIO

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

**Dr. Pradeep Teotia**Assistant Registrar, Store & Purchase

Prof. Pragati Kumar Chief Warden

**Dr. Rajesh Kumar Yadav** In-charge, Guest House

**Prof. Rajesh Birok** In-charge, Health Centre

**Prof. Nitin Puri**Transport Officer, Security Officer

**Prof. Rajesh Birok** In-charge, Health Centre

Prof. Rajiv Chaudhary Suptd. (Exam)

Sh. Madhukar Cherukuri OSD (Result)

**Dr. Vivek Tripathi** Assistant Registrar (International Affairs)

**Prof. S. K. Garg** Chairperson, library Committee

> Prof. Reeta Wattal Chairperson, ICC

**Dr. Grish Kumar** CEO, DTU-IIF

Prof. Rajesh Rohilla HoD, T & P

**Sh. Piyush Vaish** Knowledge Network Manager

# 2 Academic and Non-Academic Staff

## 2.1 Academic Staff

S. No.	Department	Professor	Adjunct/ Honorary/ Emeritus Professor	Associate Professor	Assistant Professor	Programmer/ Foreman Instructor/ Visiting Faculty	Total
1	Applied Chemistry	8	-	-	6	-	14
2	Applied Mathematics	10	1	1	12	-	22
3	Applied Physics	7	-	-	13	-	20
4	Biotechnology	3	1	1	2	-	6
5	Civil Engineering	15	-	6	4	-	25
6	Computer Science and Engineering	7	-	1	14	1	23
7	Department of Design	1	1	-	5	2	9
8	Delhi School of Management	2	1	3	9	-	15
9	Electronics & Communication Engineering	15	-	1	31	-	47
10	Electrical Engineering	22	2	3	25	-	52
11	Environmental Engineering	2	-	-	4	-	6
12	Humanities	2	-	2	1	-	5
13	Information Technology	3	-	1	7	-	11
14	Mechanical Engineering	21	-	7	9	2	39
15	Software Engineering	1	-	-	7	-	8
16	University School of Management & Entrepreneurship	1	1	1	15	1	19
	Total	120	6	25	164	6	321

# 2.2 Non-academic Staff (Regular)

S. No.	Post	Total Filled Post	Present Posting	Remarks
1	Controller of Examination	1	Examination branch	Regular
2	Chief Operating Officer	1	Computer Center	Regular
3	Deputy Registrar	2	Establishment Branch-1	Regular
			GA-1	Regular
4	Deputy Controller of Account	1	Account Branch	Deputation
5	Senior Account Officer / DDO	2	Account Branch	Deputation
6	Knowledge Network Manager	1	Computer Centre	Regular
7	EDP Manager	1	Result Section	Regular
8	Assistant Registrar	4	Legal Branch, Planning Branch, Vigilance Branch, PGMS and RTI Cell-1	Regular
			East Campus – 1	Regular
			East Campus – 1	Deputation
			Store and Purchase -1	Deputation
9	Programmer	1	CSE	Regular
10	Assistant Account Officer	2	Account Branch	Deputation
11	Section Officer	6	Academic PG-1	Regular
			Establishment -1	Regular
			Store & Purchase-1	Regular
			Account Branch -1	Deputation
			East Campus -1	Deputation
			Establishment Branch -1	Deputation
12	Assistant Engineer (CIVIL)	1	Engineering Cell	Deputation
13	SOA	5	T&P-1	Regular
			Recruitment-1	Regular
			Recruitment-1	Deputation
			Establishment-1	Deputation
			Academic (PG)-1	Deputation
14	Junior Engineer (Civil)	1	Engineering Cell	Regular

S. No.	Post	Total Filled Post	Present Posting	Remarks
15	Foreman	7	CSE-1	Regular
			ECE-1	Regular
			Electrical Engineering-2	Regular
			Mechanical Engineering-3	Regular
16	Assistant Programmer	3	Computer Center – 2	Regular
			CSE -1	Regular
17	Stenographer Grade-II	1	Legal	Regular
18	Stenographer Grade-III	4	VC Office	Regular
			Examination Branch	Regular
			Hostel Office	Regular
			on Lien	Regular
19	Sr. Mechanic	16	Mechanical-9	Regular
			Env. Engg1	Regular
			Electrical Engg1	Regular
			E&C-3	Regular
			Civil-1	Regular
			Applied Physics-1	Regular
20	Technical Assistant	3	Applied Chemistry-1	Regular
			Biotechnology -1	Regular
			ECE-1	Regular
21	Office Assistant	1	Establishment Branch	Regular
22	Junior Engineer (Electrical)	1	Engineering Cell	Regular
23	Jr. Mechanic	6	Electrical Engineering -1	Regular
			Mechanical Engineering-5	Regular
24	Junior Office Assistant	3	Account Branch	Regular
			East Campus-1	Regular
			Pension Cell	Regular
25	Chief Store Keeper	1	Store & Purchase	Regular
26	Electrician	1	Engineering Cell	Regular
27	Counter Assistant	3	Central Library	Regular
28	Draughtsman	1	Mechanical Engineering	Regular
29	Daftri	1	Account Branch	Regular

S. No.	Post	Total Filled Post	Present Posting	Remarks	
30	Driver	1	VC Office	Regular	
31	Farash	1	Engineering Cell	Regular	
32	Guest Operator	1	Engineering Cell	Regular	
33	Chowkidar	1	Account Branch	Regular	
34	Lab Attendant	1	Central Library-1	Regular	
35	Library Attendant	1	Central Library	Regular	
36	36 Multi-Tasking Staff 3		DTTE ON DIVERT CAPACITY-1	Regular	
			ECE-1	Regular	
			Engineering Cell -1	Regular	
37	Peon	1	Central Library	Regular	
38	Safai Karamchaari	5	Applied Chemistry – 1	Regular	
			CSE -1	Regular	
			Huminites-1	Regular	
			Hostel Office -1	Regular	
			Mechanical Engineering -1	Regular	
	Total	96			

# 2.3 Non-Teaching Staff (Contractual)

S. No.	Post	Total Filled Post	Present Posting
1	PS to VC	1	Dean, OEA
2	Sr. Office Assistant	2	Establishment
			Exam Branch
3	Stenographer	1	Pr. Branch of Reg.
4	Office Assistant	2	Electrical Engg.
			Establishment
5	Jr. Office Assistant	27	Exam Branch
			Mech. Engg.
			Engineering Cell
			VC Office
			Hostel Office
			RTI Cell
			Result Section
			Dean SW
			Statistical Cell
			Academic PG
			Establishment
			IT
			Project Office
			Accounts Branch
			Pr. Branch of Reg.
			Academic UG
			Dept. of Design
			Dean UG
			Academic PG
			Result Section
			Humanities
			Civil Engg
			Establishment
			Dept. Software Engg.
			Accounts Branch
			Accounts Branch
			Computer Center
6	Assistant Librarian	1	Library

S. No.	Post	Total Filled Post	Present Posting
7	Counter Assistant	2	Library
			Library
8	Asst. Store Keeper	2	Store & Purchase
			Store & Purchase
9	Asst. Programmer	3	Result Section
			Computer Centre
			Applied Math.
10	Network Assistant	2	Computer Centre
			Computer Centre
11	Technical Assistant	4	ECE
			IT
			CSE
			DSM
12	Jr Technical Asst.	16	Electrical Engg.
			Computer Centre
			Software Engg
			Software Engg
			Engg. Physics
			Engg. Physics
			Engg. Physics
			Mech. Engg.
			Mech. Engg.
			Mech. Engg.
13	Senior Mechanic	5	Applied Chemistry
			Mech. Engg.
			Mech. Engg.
			Biotechnology
			Biotechnology

S. No.	Post	Total Filled Post	Present Posting		
14	Sr. Mechanic Gp-I	6	Electrical Engg.		
			Mech. Engg.		
			Mech. Engg.		
			Mech. Engg.		
			Mech. Engg.		
			Mech. Engg.		
15	Sr. Mechanic Gp-II	4	Mech. Engg.		
			Mech. Engg.		
			Mech. Engg.		
			ECE		
16	Sr. Mechanic Gp-III	1	Mech. Engg.		
17	Sr. Mechanic Gp-V	3	Mech. Engg.		
			Mech. Engg.		
			Mech. Engg.		
18	Sr. Mechanic Gp-VI	1	Mech. Engg.		
19	Junior Mechanic	6	Applied Chemistry		
			Applied Physics		
			Applied Chemistry		
			Biotechnology		
			EnvEngg		
			EnvEngg		
20	Jr Mechanic Gp-l	1	Electrical Engg.		
21	Technical Instructor	1	ECE		
22	JE (Electrical)	1	Engineering Cell		
23	JE (Civil)	1	Engineering Cell		
24	Jr. Office Assistant	3	Establishment		
			Establishment		
			Accounts Branch		
25	Technical Assistant	1	CSE		
26	Caretaker	1	Project Office		
27	Electrician	1	Engineering Cell		
28	Cook	1	Guest House		
29	Driver	2	Transport Office		
			Transport Office		
	Total 102				

# **3 Academic Programmes**

# **3.1 Undergraduate Courses**

S. No.	Department	B. Tech. Programme	Duration	Sanctioned Intake	Total No. Admitted
1	Applied Chemistry	Chemical Engineering	4 years	77	76
2	Applied Mathematics	Mathematics and Computing	4 years	182	181
3	Applied Physics	Engineering Physics	4 years	117	116
4	Biotechnology	Biotechnology	4 years	77	73
5	Civil Engineering	Civil Engineering	4 years	152	151
		Civil Engineering (Cont. Edu.)	4 years	60	22
6	Computer Science &	Computer Engineering	4 years	482	482
	Engineering	Software Engineering	4 years	182	181
7	Electrical	Electrical Engineering	4 years	302	301
	Engineering	Electrical Engineering (Cont. Edu.)	4 years	60	49
8	Electronics & Communication	Electronics & Communication Engineering	4 years	242	241
	Engineering	Electronics & Communication Engineering (Cont. Edu.)	4 years	60	09
9	Environmental Engineering	Environmental Engineering	4 years	77	76
10	Information Technology	Information Technology	4 years	182	181
11	Mechanical	Mechanical Engineering	4 years	302	301
	Engineering	Production & Industrial Engineering	4 years	77	76
		Mechanical Engineering with specialization in Automotive Engineering	4 years	77	76
		Mechanical Engineering (Cont. Edu.)	4 years	60	10
Total				2768	2602
В.Те	B.Tech. Lateral Entry 3 years			15	15
Total NRI Candidates			380	125	
	I PMSSS Candidates			10	10
Gran	nd Total			3173	2752

S. No.	Department	Programme	Duration	Sanctioned Intake	Total No. Admitted
1	University School	BBA	3 Years	182+18 (FN)	167
	of Management &	BA-Economics (Hons.)	3 Years	182+18 (FN)	162
	Entrepreneurship (USME)				
2	Department of Design B. Des. 4 Year		4 Years	123+18 (FN)	115
Tota	ıl	541	444		

# **3.2 Post Graduate Courses**

# Post Graduate Courses (Master of Technology)

_					
S. No.	Department	M. Tech. Programme	Duration	Sanctioned Intake	Total No. Admitted
1	Applied Chemistry	Polymer Technology	2 years	25+5	0
2	Applied Physics	Material Science & Technology	2 years	25+5	0
3	Biotechnology	Bioinformatics	2 years	25+5	08
		Industrial Biotechnology	2 years	25+5	21
4	Civil Engineering	Geotechnical Engineering	2 years	25+5	19
		Hydraulics & Water Resources Engineering	2 years	24+5	08
		Structural Engineering	2 years	25+5	25
		Geoinformatics	2 years	18+5	05
5	Computer Science	Computer Science & Engineering	2 years	25+5	22
	& Engineering	Artificial Intelligence	2 years	30+5	27
6	Information Technology	Information System	2 years	25+5	23
7	Electronics & Communication	Microwave & Optical Communication Engineering	2 years	25+5	02
	Engineering	Signal Processing Digital Design	2 years	25+5	11
		VLSI Design and Embedded System	2 years	25+5	24
8	Electrical	Control & Instrumentation	2 years	25+5	08
	Engineering	Power System	2 years	25+5	06
		Power Electronics and Systems	2 years	30+5	16
9	Environmental Engineering	Environmental Engineering	2 years	25+5	17
10	Mechanical	Production Engineering	2 years	25+5	16
	Engineering	Thermal Engineering	2 years	25+5	23
		Industrial Engineering and Management	2 years	30+5	0
		Energy Systems and Management	2 years	30+5	0
		Computer Aided Analysis and Design	2 years	30+5	0
11	Software	Software Engineering	2 years	25+5	19
	Engineering	Data Science	2 years	30+5	11
Total	I			647+125	308

## **Management Programmes**

S. No.	Department	Programme	Duration	Sanctioned Intake	Total No. Admitted
1	USME	MBA innovation, Entrepreneurship and Venture Development	2 years	40	14
		MBA Business Analytics	2 years	40	24
		Master of Business Administration	2 years	120	80
		MBA Family Business & Entrepreneurship	2 years	40	15

3. ACADEMIC PROGRAMMES

S. No.	Department	Programme	Duration	Sanctioned Intake	Total No. Admitted
2	DSM	Master of Business Administration (Executive)	2 years	75	40
		Master of Business Administration	2 years	150	139
Tota	l	465	312		

# M. Design

S. No.	Department	Programme	Duration	Sanctioned Intake	Total No. Admmited
1	M.Des.	InteractionDesign	2 years	15	14
		Product Design	2 years	15	15
		Visual Communication	2 years	15	12
		Design			
Total				45	41

# M.Sc. Programme

S. No.	Department	Programme	Duration	Sanctioned Intake	Total No. Admmited
1	M.Sc.	M.Sc. Chemistry	2 years	60	54
		M.Sc. Mathematics		60	54
	M.Sc. Physics		2 years	60	50
		M.Sc. Biotechnology	2 years	60	51
Total	_	_		240	209

# 3.3 Ph.D. Programmes

S. No.	Department	Programme	Total No. Admmited
1	Applied Chemistry	Chemical Engineering	4
		Chemistry	10
2	Applied Mathematics- Mathematics (AM)	Applied Mathematics- Mathematics	15
3	Applied Physics	Physics	20
		Engineering Physics (EP)	1
4	Biotechnology (BT)	Biotechnology (BT)	9
5	Civil Engineering (CE)	Civil Engineering (CE)	27
6	Computer Science and Engineering (CSE)	Computer Science and Engineering (CSE)	13
7	Electrical Engineering (EE)	Electrical Engineering (EE)	44
8	Electronics and Communication	Electronics and Communication	37
	Engineering (ECE)	Engineering (ECE)	
9	Mechanical Engineering (ME)	Mechanical Engineering (ME)	36
10	Environmental Engineering (ENE)	Environmental Engineering (ENE)	8
11	Humanities (HUM)	Humanities (HUM)	6
12	Information Technology (IT)	Information Technology (IT)	14
13	Delhi School of Management (DSM)	Delhi School of Management (DSM)	16
14	University School of Management and	University School of Management and	3
	Entrepreneurship (USME)	Entrepreneurship USME	
15	USME (IEV)	USME (IEV)	5
16	USME-Economics	USME-Economics	0
17	Department of Design	Department of Design	6
18	Software Engineering (SWE)	Software Engineering	1
		Computer Science	6
Tota			281

# **4 Academic Departments**

#### 4.1 **DEPARTMENT OF APPLIED CHEMISTRY**



Prof. S. G. Warkar HoD

# **ACADEMIC PROGRAMMES B.Tech.** (Chemical Engineering) Intake: 77 Admitted: 76

M.Sc. (Chemistry) Intake: 60 Admitted: 54

Ph.D. (Chemical Engineering):

Ph.D. (Chemistry):

#### **LABORATORIES**

The department has well established laboratories such as Applied Chemistry Lab, Polymer Chemistry Lab, Polymer Testing & Characterization Lab, Polymer Processing Lab, Chemical Technology Chemical Reaction Engineering Instrumentation Lab. Heat and Mass Transfer Lab. Fibre Technology Lab, Computer Aided Design, Innovation Lab, and four Research Labs. All UG/ PG students and research scholars carry out their projects in these laboratories jointly with experts from industry and teachers of the department.

#### **ACHIEVEMENTS** -

Journal Publications

52

**Book Chapters** 

5

#### SALIENT FEATURES

The department aims provide state-of-art knowledge and practical skills to the UG & PG students in the diverse subjects of Applied Chemistry, Chemical Engineering, and Polymer Technology. Facilitating R&D activities at UG and PG levels is the prime concern. Innovations in chemistry, chemical and polymer technology are focused to provide green technologies, product 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 our PG and doctoral students are excelling beyond imagination.



#### **Professors: 8**

- Prof. S. G. Warkar (HoD), Ph.D., Areas of Interest: Inorganic Chemistry and Polymers.
- Prof. D. Kumar, Ph.D., Area of Interest: Conducting Polymer.
- **Prof. R. C. Sharma,** Ph.D., Areas of Interest: Electro Solution Chemistry and Molten Electrolytes.
- **Prof. Archana Rani,** Ph.D., Area of Interest: Organic Chemistry.
- Prof. Rajinder K. Gupta, Ph.D., Areas of Interest: Organic Chemistry & Bio-polymer, Nutraceuticals & functional foods.
- Prof. Anil Kumar. Ph.D., Areas Interest: Bio Inorganic Chemistry, Solar Cell, Cell Imaging, Electronic Structure cal. using G03 suite program.
- **Prof. Ram Singh,** Ph.D., Areas of Interest: Organic and Medicinal Chemistry, Neurochemistry and Natural Products.
- **Prof. Roli Purwar,** Ph.D., Areas of Interest: Bio-polymers, Polymeric membranes, Textiles processing, Natural Materials and their application.

#### **Assistant Professors: 6**

- Dr. Richa Srivastava, Ph.D., Area of Interest: Organic Synthesis.
- Dr. Saurabh Mehta, Ph.D., Areas Interest: Organic **Synthesis** (conventional and combinatorial), bioorganic and Medicinal Chemistry, etc.
- Dr. D. Santhiya, Ph.D., Areas of Nano-Biotechnology, Interest: nanopatterned Biosynthesis of materials. Environmental Biotechnology and Surface Chemistry.
- Dr. Raminder Kaur, Ph.D., Areas of Interest: Reaction Engineering, Bio-based Polymers, Polymer Composites and Phase Change Materials.
- Dr. Poonam, Ph.D., Area of Interest: Material Chemistry.
- Dr. Manish Jain, Ph.D., Areas of Chemical Engineering, Membrane based separations and Polymer Science.

#### **Achievements of the Department**

The department of Applied Chemistry is one of the oldest departments of the university. We provide 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 last one year, the department has published more than 52 research papers attended national and international conferences/ seminars. The department has also contributed towards conference proceeding and book chapters of national and international repute. The students of the department have been placed in well-established industries and also some of them taken admission in foreign universities.

# Teachers Provided with Financial Support

Three faculty members of the department have sponsored projects from DST and UCG and other three faculty members have got financial aid from DTU under DTU research grant scheme.

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

Name of Faculty	Course/ Programme	Торіс	Organizer	Duration
Prof. S. G. Warkar	FDP	NBA accreditation procedures	NITTTR Chennai at DTU, Delhi	9 <sup>th</sup> -11 <sup>th</sup> May, 2022
Dr. Deenan Santhiya	FDP	NBA accreditation procedures	NITTTR Chennai at DTU, Delhi	9 <sup>th</sup> -11 <sup>th</sup> May, 2022
Dr. Richa Srivastava	FDP	NBA accreditation procedures	NITTTR Chennai at DTU, Delhi	9 <sup>th</sup> -11 <sup>th</sup> May, 2022
	Presented paper	International Conference on "Recent Trends in Drug Discovery and Development"	Maitreyi College, DU, Chanakyapuri	8 <sup>th</sup> -9 <sup>th</sup> October, 2021
	Skill enhancement workshop	BEYOND INDUSTRY 4.0: Energy and Environment	GGSIPU, Delhi	25 <sup>th</sup> -29 <sup>th</sup> July, 2022
	FDP	ICT Tools for effective Teaching and Learning FDP ICT-2022	Kamla Nehru Mahavidyalaya	23 <sup>rd</sup> -28 <sup>th</sup> May, 2022

Name of Faculty	Course/ Programme	Topic	Organizer	Duration
Dr. Raminder Kaur	FDP	NBA accreditation procedures	NITTTR, Chennai	9 <sup>th</sup> -11 <sup>th</sup> May, 2022
	Industrial Training	Polymer Coatings	JAS Polychem, Ghaziabad	9 <sup>th</sup> -23 <sup>rd</sup> July, 2022
	Industrial Training	Solar Cell Processing and Manufacturing	BHEL ASSCP, Gurugram	24 <sup>th</sup> June - 8 <sup>th</sup> July, 2022
	Virtual webinar	Process of Innovation Development & Technology Readiness Level (TRL) & 'Commercialization of Lab Technologies & Tech-Transfer	DTU, Delhi	24 <sup>th</sup> February, 2022
	Training	Procurement Procedures and Provisions applicable such as GFR, Procurement Manual	Directorate of Training, UTCS	28 <sup>th</sup> October, 2021
	Skill enhancement workshop	BEYOND INDUSTRY 4.0: Energy and Environment	GGSIPU, Delhi	25 <sup>th</sup> - 29 <sup>th</sup> July, 2022
Dr. Manish Jain	FDP	NBA accreditation procedures	NITTTR Chennai	9 <sup>th</sup> -11 <sup>th</sup> May, 2022
Dr. Poonam Singh	Information literacy workshop	E-Resources: A Gateway for Research, 5 <sup>th</sup> edition (2021)	Central Library, DTU	6 <sup>th</sup> -10 <sup>th</sup> September, 2021
	Skill enhancement workshop	BEYOND INDUSTRY 4.0: Energy and Environment	GGSIPU, Delhi	25 <sup>th</sup> - 29 <sup>th</sup> July, 2022
Dr. Deenan Santhiya	Industrial Training	Functional Textile Materials	The SUN DESIGN, PANIPA	13 <sup>th</sup> -26 <sup>th</sup> June, 2022
	National level workshop	Entrepreneurial innovations for early age start-up	DTU, Delhi	14 <sup>th</sup> September, 2021
Dr. Saurabh Mehta	FDP	Biomass to fuels, Chemicals and value-added products for sustainable energy and environmental future	NIT, Triuchirpapplli	20 <sup>th</sup> -24 <sup>th</sup> December, 2021
	FDP	Understanding and Training of analytical techniques: A prime requirement for research, innovation and entrepreneurship	RGPV, Bhopal	22 <sup>nd</sup> -26 <sup>th</sup> November, 2021

#### **Faculty Visit to Other Institutions** for Taking Expert Lectures and Other Academic Works:

#### Prof. S. G. Warkar

- 1. External Expert in Research and Development Committee [Chemistry] of HBTU Kanpur.
- 2. Advisory Committee member in International e-conference "Recent advancements in Chemical Sciences: Health, Environment and Society" on 8th-9th April, 2022.
- 3. Special Speaker in Online Seminar on Scientific Academic Institute of India, SLSMEE Sunday, 27th February, 2022 on the occasion of Science Day organized by DDE Science Branch, Directorate of Education, GNCT of Delhi.

#### Dr. Deenan Santhiya

Delivered an Invited talk on "L-Lysine" templated Bioactive Glass Hybrid Xerogels for tailored Textural and Rheological Properties" at Technical Programme of International Online Conference on Nano Materials (ICN 2022), 12<sup>th</sup>-14<sup>th</sup> August, 2022

## Functional MoUs with Institutions of National. International Importance. Other Universities, etc.

MoU was signed between DTU and Amicures Research Pvt. Ltd. in 2019 for a period of 5 years to promote and enhance research interest between DTU and Amicures in the area of pharmaceuticals and health care.

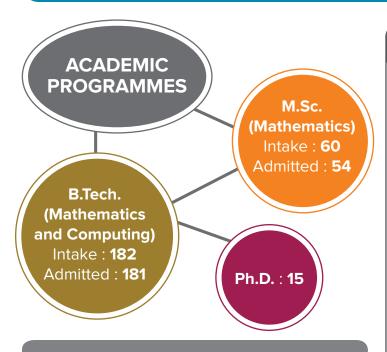
#### **Details of Student Progression** to Higher **Education (Previous Graduating Batch)**

- Jawad Igbal, B.Tech. (PSCT),
- M.S. Programme (Advanced Chemical Engineering) Imperial College London
  - Annu Pawar, B.Tech. (PSCT) M.S. Programme (Advanced Materials: Innovative Recycling)
- 1st Year: University of Miskolc, Hungary 2<sup>nd</sup> Year: University of Liege, Belgium
  - Kunal Goyal, B.Tech. (PSCT)
- M.Tech. (Chemical **Engineering**) IIT-Delhi

# 4.2 DEPARTMENT OF **APPLIED MATHEMATICS**



Prof. S. Sivaprasad Kumar HoD



#### **LABORATORIES**

The department of Applied Mathematics offers state-of-the-art computing facilities to all the undergraduate and graduate students, research scholars and faculty members. A highspeed Local Area Network connection through the Institute's central facilities, ensure that all students and faculty have the most modern computing facilities, including round-the clock internet and e-mail connection, to meet their academic and research needs. Department has three computational labs. Computational lab I, II and III fully functional and have 90 computer systems with latest configuration.

#### SALIENT FEATURES

The department of Applied Mathematics is the pride of DTU. The aim of the department is to impart the sound knowledge of Mathematics, Statistics and Computing to the students through teaching and research. The department is achieving its goals/objectives with the help of highly qualified faculty member. The research output of the department is very impressive and speaks clearly for the quality of work. Faculty members are also actively involved in research, projects and various academic activities.

#### **ACHIEVEMENTS** -

- Journal Publications 46 Conference Publications 9
- 3 Workshops Conducted



#### **Professors: 10**

- Prof. S. Sivaprasad Kumar, (HoD), M.Sc., M.Phil., Ph.D., Area of Interest: Complex Analysis.
- **Prof. H. C. Taneja,** M.Sc., M.Phil., Ph.D., Areas of Interest: Information Theory.
- Prof. Sangita Kansal, M.Sc., Ph.D., Areas of Interest: Graph Theory and Petri net Theory.
- **Prof. R. Srivastava,** M.Sc., Ph.D., Area of Interest: Numerical Simulation.
- **Prof. Naokant Deo,** M.Sc., Ph.D., Area of Interest: Approximation Theory.
- Prof. Anjana Gupta, M.Sc., M.Phil., Ph.D., Area of Interest: Optimization Techniques.
- **Prof. L. N. Das,** M.Sc., Ph.D., Area of Interest: Operations Research.
- **Prof. V. P. Kaushik,** Ph.D., Area of Interest: Operations Research.

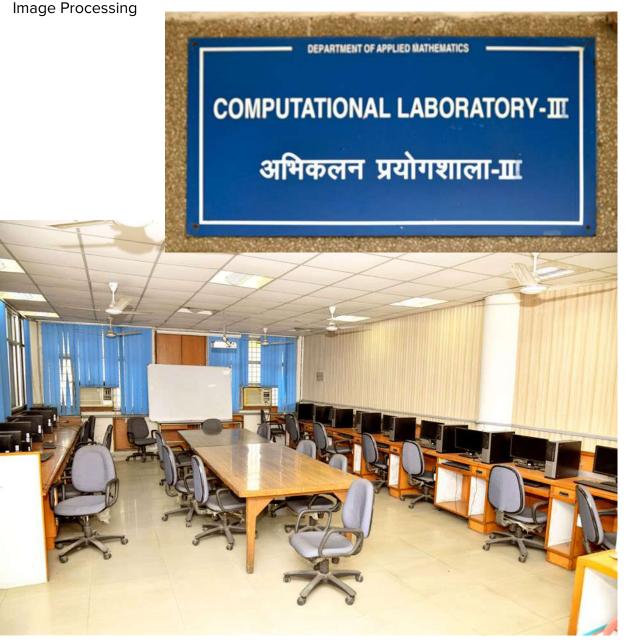
- Prof. Chandra Prakash Singh, M.Sc., Ph.D., Areas of Interest: General Relativity and Cosmology.
- Prof. Aditya Kaushik, Ph.D., Areas of Interest: Differential Equations and Numerical Analysis.

#### **Assistant Professors: 12**

- Dr. Vivek Kumar Aggarwal, M.Sc., Ph.D., Area of Interest: Numerical Analysis.
- **Dr. Nilam,** Ph.D., Area of Interest: Mathematical Modeling.
- **Dr. Dinesh Udar,** M.Sc., Ph.D., Area of Interest: Algebra.
- Mr. Rohit Kumar, M.Sc., Area of Interest: Quantum Computing and Graph Theory.
- Dr. Goonjan Jain, B.E., M.Tech., Areas of Interest: Natural Language Processing, Information Retrieval.

4. ACADEMIC DEPARTMENTS

- Dr. Dhirendra Kumar, M.Sc., M.Tech., Areas of Interest: Medical Image Processing, Image Classification and Signal Processing.
- Dr. Satyabrata Adhikari, Ph.D., Area of Interest: Quantum Information Processing.
- Ms. Payal, M.Sc., Area of Interest: Petri Net Theory.
- Ms. Trasha Gupta, B.Sc., M.Sc., M.Tech., Areas of Interest: Machine Learning,
- Sumedha Ms. Seniaray, B.Tech., M.Tech., Areas of Interest: Database Management Systems, Datawarehouse, Software Engineering, Operating Systems, Discrete Mathematics.
- Dr. Anshul Arora, B.Tech., M.Tech., Areas of Interest: Android Security, Network Security, Malware Detection.
- Mr. Jamkhongam Touthang, M.Sc., M.Phil.. Areas of Interest: Functional Analysis, Complex Analysis.



## **Achievements of the Department**

**26<sup>th</sup> July, 2022**Plantation
Drive

26<sup>th</sup>-27<sup>th</sup> May, 2022 WORKSHOP Maple 2022 and its Applications **5<sup>th</sup>-6<sup>th</sup> May, 2022**WORKSHOP
Dept. Specific
Electives
offered in M.Sc.

26th November, 2021 WORKSHOP My Story Motivational Session by Successful Innovators

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

Name of Faculty	PDP Information	Organised By	Date
Dr. Dinesh Udar	Research Methodology and Introduction to Modeling Techniques	DTU, Delhi	18 <sup>th</sup> - 23 <sup>rd</sup> July, 2022.
	Open-Source Tools for Research	Ramanujan College, DU, Delhi	9 <sup>th</sup> - 15 <sup>th</sup> December, 2021
Mr. Rohit Kumar	Research Methodology and Introduction to Modeling organized	DTU, Delhi	18 <sup>th</sup> - 23 <sup>rd</sup> July, 2022
	Maple-2022 and Its Applications	DTU, Delhi	26 <sup>th</sup> -27 <sup>th</sup> May, 2022
	Open-Source Tools for Research	Ramanujan College, DU, Delhi	9 <sup>th</sup> - 15 <sup>th</sup> December, 2021
Dr. Dhirendra	Maple 2022 & Its Applications	DTU, Delhi	26 <sup>th</sup> -27 <sup>th</sup> May, 2022
Kumar	Application Areas of Data Analytics	IIIT, Allahabad	23 <sup>nd</sup> - 27 <sup>th</sup> October, 2021
	A Blend of Internet of Things, Cyber Security & Block chain and Applications	NIT, Silchar	23 <sup>rd</sup> - 27 <sup>th</sup> August, 2021
	Advancements in Computer Science and Information Technology (ACSIT - 2021)	Sant Longowal Institute of Engineering and Technology, Punjab	13 <sup>th</sup> - 18 <sup>th</sup> December, 2021
	Artificial Intelligence: How happy should we be	BHU, Varanasi	21st August, 2021
Dr. Goonjan Jain	Maple 2022 and its applications	DTU, Delhi	26 <sup>th</sup> -27 <sup>th</sup> May, 2022
	Education 4.0	Ramanujan College, DU, Delhi	21st August, 2021
	Webinar on Entrepreneurship and Innovation as Career Opportunity	DTU, Delhi	24 <sup>th</sup> November, 2021
	Online workshop on Modeling and Simulating Physical System in Electrical Engineering	UIE, Chandigarh	24 <sup>th</sup> November, 2021
	One–Day Webinar on National Education Day	DTU, Delhi	11 <sup>th</sup> November, 2021
Ms. Payal	Maple 2022 and its applications	DTU, Delhi	26 <sup>th</sup> -27 <sup>th</sup> May, 2022
	NBA Accreditation Procedures	DTU, Delhi	9 <sup>th</sup> - 11 <sup>th</sup> May, 2022

Name of Faculty	PDP Information	Organised By	Date
Dr. Anshul Arora	Maple 2022 and its applications	DTU, Delhi	26 <sup>th</sup> -27 <sup>th</sup> May, 2022
Ms. Trasha Gupta	Maple 2022 and its applications	DTU, Delhi	26 <sup>th</sup> -27 <sup>th</sup> May, 2022
	NBA Accreditation Procedures	DTU, Delhi	9 <sup>th</sup> - 11 <sup>th</sup> May, 2022
	Digital Image Processing and Analysis: Applications with Practical	Shaheed Sukhdev College of Business Studies, in collaboration with Hansraj College, DU	25 <sup>th</sup> - 30 <sup>th</sup> April, 2022
Ms. Sumedha Seniaray	Two-days workshop on "Departmental Specific Elective offered in M. Sc. Curriculum	DTU, Delhi	5 <sup>th</sup> - 6 <sup>th</sup> May, 2022
	My Story - Motivational Session by Successful Innovators	DTU, Delhi	26 <sup>th</sup> November, 2021
Dr. Vivek Kumar Aggarwal	Introduction to Financial Mathematics: exploring the machine learning approach for option pricing problems in the stock market	DTU, Delhi	19 <sup>th</sup> - 23 <sup>rd</sup> August, 2021

# Faculty Visit to Other Institutions for Taking Expert Lectures and Other Academic Works

#### PROF. H. C. TANEJA

**Topic**: Mathematics & its

application aspects

Organizer: IGU Meerpur, Rewari

Duration: 22<sup>nd</sup> December, 2021

**Topic**: Information Theory & Its

**Applications** 

**Organizer:** M D University, Rohtak **Duration:** 22<sup>nd</sup> - 26<sup>th</sup> December, 2021

#### MR. ROHIT KUMAR

**Topic**: Mathematica Software and

Its Applications

Organizer: Sri Guru Gobind Singh

College of Commerce

**Duration**: 28<sup>th</sup> - 31<sup>st</sup> October, 2021

#### DR. ANSHUL ARORA

**Topic**: How to Detect Mobile

Malfunctioning

**Organizer:** Gurugram University **Duration:** 24<sup>th</sup> December, 2021

# 4<sup>th</sup> December. 2021 **Duration**

#### DR. SATYABRATA ADHIKARI

**Topic**: Structural Physical

Approximation of Partial

Transposition

Organizer: IISER, Kolkata

**Duration**: 20<sup>th</sup> - 27<sup>th</sup> June, 2022

**Topic**: Graph theoretical approach

to detect the d1 d2 dimensional bipartite entangled system

Organizer: ISI, Kolkata

**Duration**: 14<sup>th</sup> - 24<sup>th</sup> February, 2022

**Topic**: Quantum Teleportatio

Organizer: IIIT, Kota

**Duration** : 21<sup>th</sup> - 25<sup>th</sup> January, 2022

**Topic**: Quantum Teleportation and

Superdense Coding

**Organizer:** ABV-IIITM Gwalior **Duration:** 4<sup>th</sup> - 8<sup>th</sup> October, 2021

**Topic**: Quantum Cryptography **Organizer**: Central University of Punjab

**Duration**: 23<sup>rd</sup> - 27<sup>th</sup> August, 2021

#### PROF. SANGITA KANSAL

**Topic**: Signed Petrinet and its

Applications

Organizer: MDU, Rohtak

**Duration:** 18<sup>th</sup> - 22<sup>nd</sup> October, 2021

Topic : Graph Theory
Organizer : DTU, Delhi

**Duration** : 5<sup>th</sup> - 6<sup>th</sup> May, 2022

#### DR. GOONJAN JAIN

**Topic**: Database Management

System

Organizer: DTU, Delhi

**Duration** : 5<sup>th</sup> - 6<sup>th</sup> May, 2022

**Topic**: Natural Language

Processing

Organizer: JNU, Delhi

**Duration**: 16<sup>th</sup> - 18<sup>th</sup> June, 2022

**Topic**: Natural Language

Processing

Organizer: JNU, Delhi

**Duration**: 26<sup>th</sup> October, 2021

**Topic**: Natural Language

Processing

Organizer: GIT, Udaipur

Duration: 28th May, 2022

#### Students Qualifying in State/ National/ International Level Examinations

- Abhay Srivastava, qualified GATE in 2022.
- Yash sharma, qualified NET in 2022.

## Detail of Student Progression to Higher Education (Previous Graduating Batch) (The Current Year)

 Mr. Manit Kumar, joined Indian Institute of Management, Shillong.

#### DR. DHIRENDRA KUMAR

**Topic**: Bias-corrected intuitionistic

fuzzy c-means with spatial neighborhood information approach for human brain MRI image segmentation

Organizer: JNU, Delhi

**Duration**: 26<sup>th</sup> - 28<sup>th</sup> June, 2022

**Topic**: Medical Image Segmentation

using Fuzzy Set

**Organizer:** KLEF, Hyderabad **Duration:** 4<sup>th</sup> December, 2021

**Topic**: Cryptography and Coding

Theory

Organizer: DTU, Delhi

**Duration** : 5<sup>th</sup> - 6<sup>th</sup> May, 2022

#### **MS. TRASHA GUPTA**

**Topic**: Machine Learning

Organizer: DTU, Delhi

**Duration** : 5<sup>th</sup> - 6<sup>th</sup> May, 2022

#### **MS. SUMEDHA SENIARAY**

**Topic**: Data Mining **Organizer**: DTU, Delhi

**Duration** : 5<sup>th</sup> - 6<sup>th</sup> May, 2022

# Detail of Capability Enhancement and Development Schemes Organized by Department

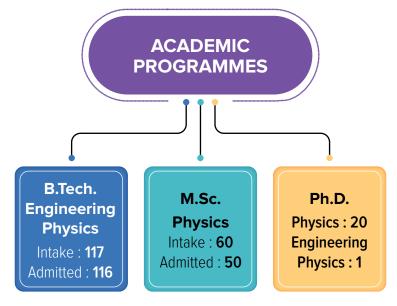
- Department of Applied Mathematics organized a workshop titled "Maple 2022 and its applications" during 26<sup>th</sup> -27<sup>th</sup> May, 2022.
- Department of Applied Mathematics organized a workshop titled "My Story-Motivational Session by Successful Innovators" on 26th November, 2021.
- Department of Applied Mathematics organized a workshop titled "Departmental Specific Elective offered in M. Sc. Curriculum" during 5<sup>th</sup> - 6<sup>th</sup> May, 2022.

4. ACADEMIC DEPARTMENTS

# 4.3 DEPARTMENT OF **APPLIED PHYSICS**



Prof. Rinku Sharma HoD



#### **LABORATORIES**

The department has 27 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.

#### **ACHIEVEMENTS**

- **Journal Publications**
- Conference Publications

#### 84 43

#### **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 challenges future and their overall sustainable professional growth

# अनुप्रयुक्त भौतिकी विभाग DEPARTMENT OF APPLIED PHYSICS

#### **Professors: 7**

**ACADEMIC STAFF** 

- Prof. Rinku Sharma (HoD), Ph.D., Areas of Interest: Atomic & Molecular Physics, Plasma Physics, THz Radiation Emission, and linear non-linear properties of low dimensional structures.
- Prof. Suresh C. Sharma, Former Dean (Acad-PG), Ph.D., Areas of Interest: Plasma Physics/Plasma Applications, Nanostructures especially Carbon Nanotubes (CNTs), Graphenes, Graphene-CNT Composites, CNTFET, Graphene FET, CNTFET based Biosensors, Dusty Plasma/ Strongly Coupled Dusty Plasma, High Power Microwave Devices, THz Radiation Emissions.
- **Prof. R. K. Sinha,** Ph.D., Areas of Interest: Fibre optics and optical communication.

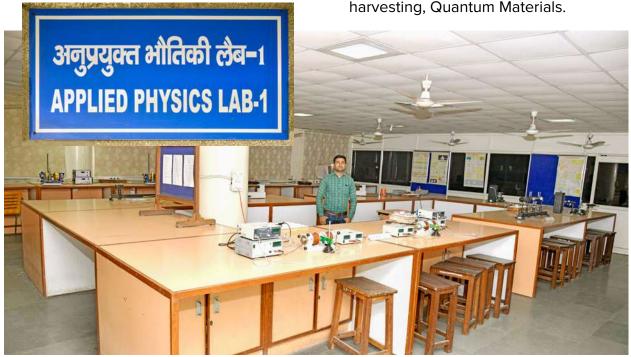
- Prof. A. S. Rao, Ph.D., Areas of Interest: Solid state spectroscopy and atmospheric sciences.
- Prof. Vinod Singh, Ph.D., Areas of Interest: the Synthesis and characterization of functional nanomaterials.
- Prof. Rishu Chaujar, Ph.D., Areas of Interest: Semiconductor device modeling simulation and analysis of MOSFETS & HEMTS for RF & wireless applications.
- Prof. Nitin K. Puri, Ph.D., Areas of Interest: Nanomaterials for Energy Harvesting and Healthcare Applications, Sensors, Bio-sensors, Ion-Beam modification of materials, Thin films.

4. ACADEMIC DEPARTMENTS

#### **Assistant Professors: 13**

- **Dr. M. S. Mehata,** Ph.D., Areas of Interest: fluorescent spectroscopy, Time-resolved photoluminescence. Nanomaterials, Quantum dots, and 2-D Materials.
- Dr. Pawan K. Tyagi, Ph.D., Areas of Interest: Carbon nanotubes: field emitters, graphene synthesis, and single crystal diamond synthesis.
- **Dr. Yogita Kalra,** Ph.D., Areas of Interest: Fiber and integrated optics, nanophotonics, photonic crystals and their device applications.
- **Dr. M. Jayasimhadri,** Ph.D., Areas Optical/fluorescent of Interest: spectroscopy, Luminescent Materials, Materials science, and nanotechnology.
- Dr. Ajeet Kumar, Ph.D., Areas of Interest: Fiber optics, integrated optics, and Nonlinear Optics.
- **Dr. Amrish K. Panwar,** Ph.D., Areas Surface Interest: modification. Energy storage & conversion devices, multiferroic materials, and thermoelectric materials.

- **Dr. Bharti Singh,** Ph.D., Areas of Interest: Piezo-Triboelectric Nanogenerator, Wearable Electronics, Resistive Memory Devices, Scanning Probe Microscopy, Synthesis and applications of Janus 2D materials, Polymer synthesis.
- **Dr. Deshrai Meena.** Ph.D.. Areas of Interest: Gas Sensors based on metal. oxides.
- Dr. Renuka Bokolia, Ph.D., Areas of Interest: Ferroelectric ceramics, Up conversion luminescence, Phosphors, Dielectric materials.
- Dr. Sarita Baghel, Ph.D., Areas of Interest: Solar Cells and solar materials.
- Mr. Yogendra Kumar Meena, M.Sc., Ph.D. (Pursuing), Areas of Interest: Nanomaterials and their applications, Mathematical Modeling, Quantum dots.
- Dr. Richa Sharma, Ph.D., Areas of Interest: piezoelectric energy harvesting materials, ferroelectric and dielectric ceramics.
- Dr. Mukhtiyar Singh, Ph.D., Areas of Interest: Theoretical Condensed Matter Physics, Density Functional Theory, 2D Materials for thermoelectric energy harvesting, Quantum Materials.



#### **Achievements of the Department**

- Department of Applied Physics has received a grant of ₹ 20 Lacs for the modernization of the labs under the AICTE-sponsored "Modernization and Removal of Obsolescence (MODROB)" Scheme.
- Department of Applied Physics has received a grant of ₹ 1 Lac under the AICTE- Scheme for Promoting Interests, Creativity and Ethics among Students (SPICES) Scheme.
- Many faculties of department of Applied Physics have received the DTU Research Excellence Award.
- Department of Applied Physics in consultation with HRDC- DTU has organized following events:
  - Two-days online workshop on "Atomic Energy: Peaceful Use and Job Opportunities" during 6<sup>th</sup> - 7<sup>th</sup> September, 2021.
  - National Education Day Webinar on 11<sup>th</sup> November, 2021.

- Training programme for newly recruited Assistant Professors of DTU during 29<sup>th</sup> - 30<sup>th</sup> November, 2021
- National Science Day Lecture (Online) on 28<sup>th</sup> February, 2022.

Teachers Provided with Financial Support to Attend Conferences/ Seminars/Symposia/Workshops/ Short Term Course/Guest Lecture/ GIAN/TEQIP etc.

- Dr. Amrish K. Panwar, Dr. Ajeet Kumar, Dr. Yogita Kalra, Dr. M. Jayasimhadri and Dr. Mohan Singh Mehata received ₹ 2000 (each) for attending an industrial training program organized by M/S Kumaun Engineering Enterprises, Almora, Uttarakhand, via online mode during 3<sup>rd</sup>-18<sup>th</sup> December, 2021.
- Prof. Nitin Kumar Puri received ₹ 64000 for attending an Offline Workshop on "Disciplinary Rules and Procedures" organized by National Academy of Human Resource and Development (NAHRD) during 12<sup>th</sup>-15<sup>th</sup> July, 2022.

# **Details of Teachers Attending PDPs, Orientation Programme, Refresher Course, Short Term Course**

Name of Faculty	Course/ Programme	Торіс	Organizer	Duration
Dr. Deshraj Meena	Interdisciplinary National Refresher course	The quintessential educator- challenges and opportunities in the changing world	ARSD College, University of Delhi	23 <sup>rd</sup> August, - 6 <sup>th</sup> September, 2022
Dr. Richa Sharma	International conference	Nanotechnology for sustainable living & environment (ICON-NSLE 2022)	Department of Chemical Engineering, Birla Institute of Technology Science, Pilani in association with Pilani Regional Center Indian Institute of Chemical Engineers (IIChE), and AIChE Pilani student chapter.	14 <sup>th</sup> - 16 <sup>th</sup> April, 2022

Name of Faculty	Course/ Programme	Topic	Organizer	Duration
Prof. Rishu Chaujar	FDP	NBA Accreditation Procedures	IQAC, DTU, Delhi	9 <sup>th</sup> - 11 <sup>th</sup> May, 2022
	Session Chair (WECON-2022)	World Engineering Conference on Contemporary Technologies	Chitkara University, Chandigarh	20 <sup>th</sup> – 21 <sup>st</sup> May, 2022
Dr. Mohan Singh Mehata	Symposium	celebrating the 60 <sup>th</sup> anniversary of the fiber laser	Deen Dayal Upadhyaya College, DU and the National Academy of Science under the aegis of DBT star college program	22 <sup>nd</sup> – 23 <sup>rd</sup> January, 2022
	Jury member (Poster presentation)	National Science Day	CSIR-NPL,Delhi	28 <sup>th</sup> February, 2022
	Expert (Evaluation of Innovative Projects)	Inspire Awards-Manak of National Innovation Foundation -India	Department of Science and Technology Govt. of India	November 2021
	Industrial Training	Modelling of optoelectronic materials using different quantum chemical methods	M/S Kumaun Engineering Enterprises, Almora, Uttarakhand	3 <sup>rd</sup> -18 <sup>th</sup> December, 2021
Dr. Amrish K. Panwar	Industrial Training	Modeling of optoelectronic materials using different quantum chemical methods	M/S Kumaun Engineering Enterprises, Almora, Uttarakhand	3 <sup>rd</sup> - 18 <sup>th</sup> December, 2021
	Information literacy workshop	E-Resources: Gateway for Research	Central Library, DTU, Delhi	6 <sup>th</sup> -10 <sup>th</sup> September, 2021
	Webinar	National Education Day	HRDC, DTU in association with Institution Innovation Council-DTU and DTU-Innovation and Incubation Foundation	11 <sup>th</sup> November, 2021
	FDP	Research Methodology and Introduction to Modelling Techniques	Delhi School of Management, DTU, Delhi	18 <sup>th</sup> - 23 <sup>rd</sup> September, 2022
Dr. Ajeet Kumar	Industrial training	Industrial Training	M/S Kumaun Engineering Enterprises, Almora, Uttarakhand	3 <sup>rd</sup> - 18 <sup>th</sup> December, 2021

Name of Faculty	Course/ Programme	Торіс	Organizer	Duration
Dr. M. Jayasimhadri	Industrial Training	Modelling of Optoelectronic Materials using Different Quantum Chemical Methods	M/S. Kumaun Engineering Enterprises, Almora, Uttarakhand	3 <sup>rd</sup> - 18 <sup>th</sup> December, 2021
	FDP	NBA Accreditation Procedures	NITTTR, Chennai at DTU, Delhi	6 <sup>th</sup> - 8 <sup>th</sup> June, 2022
	FDP	Research Methodology and Introduction to Modelling Techniques	DTU, Delhi	18 <sup>th</sup> - 23 <sup>rd</sup> July, 2022
Dr. Mukhtiyar Singh	Refresher	19 <sup>th</sup> Refresher Course in Physical Sciences & Nano Sciences	HRDC Jawaharlal Nehru University (JNU), Delhi	10 <sup>th</sup> - 22 <sup>nd</sup> January, 2022
	FDP	Research Methodology and Introduction to Modelling Techniques	Delhi School of Management, DTU, Delhi	18 <sup>th</sup> - 23 <sup>rd</sup> July, 2022
	Online Lecture Series	National Education Policy 2020: Implementation Challenges and Path Ahead	School of Physical Sciences, Jawaharlal Nehru University (JNU), Delhi & Indian Association of Physics Teachers (IAPT)	19 <sup>th</sup> February, - 2 <sup>nd</sup> April, 2022
	Webinar	National Education Day	HRDC, DTU, Delhi in association with Institution Innovation Council-DTU and DTU-Innovation and Incubation Foundation	11 <sup>th</sup> November, 2021
	Online Workshop	High-Performance Computing for Astrophysics and Astronomy	SKA-India Consortium and Indian Institute of Technology, Kharagpur	20 <sup>th</sup> - 23 <sup>rd</sup> September, 2021
Dr. Bharti Singh	Webinar	National Education Day	HRDC, DTU, Delhi in association with Institution Innovation Council-DTU and DTU-Innovation and Incubation Foundation	11 <sup>th</sup> November, 2021
	Event	Har Ghar Tiranga Week	DTU, Delhi	12 <sup>th</sup> -15 <sup>th</sup> August, 2022
	FDP	Meaningful Research & Intellectual Property Rights	Teaching Learning Centre, Ramanujam College, University of Delhi	23 <sup>rd</sup> - 29 <sup>th</sup> May, 2022

Name of Faculty	Course/ Programme	Topic	Organizer	Duration
Dr. Renuka Bokolia	E-workshop	Entrepreneurial innovations for early-stage startups	Department of Electrical Engineering, DTU, Delhi	1 4 <sup>t h</sup> September, 2021.
	Webinar	National Education Day	HRDC, DTU, Delhi in association with Institution Innovation Council-DTU and DTU-Innovation and Incubation Foundation	11 <sup>th</sup> November, 2021
	National Conference	Chemistry for Sustainable Development - Academia and Industry Perspectives	Department of Chemistry, K. J. Somaiya College of Science and Commerce, Vidyavihar in association with Chemistry Division, BARC, Mumbai	22 <sup>nd</sup> - 23 <sup>rd</sup> April, 2022
	International Conference	Challenges to Disaster Risk Reduction and Resilient Habitat	National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with Shaheed Bhagat Singh College, University of Delhi	5 <sup>th</sup> - 6 <sup>th</sup> April, 2022
	FDP	Research Methodology and Introduction to Modelling Techniques	Delhi School of Management, DTU, Delhi	18 <sup>th</sup> - 23 <sup>rd</sup> July, 2022
	Online Training Program/ Workshop	Scientific Communications	CSIR-National Physical Laboratory, New Delhi	25 <sup>th</sup> - 26 <sup>th</sup> March, 2022
	Online training	Disaster Risks Climate Change and Resilient Development	National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with DTU, Delhi	5 <sup>th</sup> - 7 <sup>th</sup> April, 2022
Mr. Y. K. Meena	Webinar	National Education Day	HRDC, DTU, Delhi in association with Institution Innovation Council-DTU and DTU-Innovation and Incubation Foundation	11 <sup>th</sup> November, 2021.
	AICTE- approved 7 Modules		NITTTR	January, 2022

#### Visit of Faculty to Other Institutions for Taking Experts Lectures/Other **Academic Work**

#### Prof. Suresh C. Sharma

**Topic:** Analytical study on plasma pre-treatment effects on the catalyst and corresponding carbon nanotube growth

**Organizer:** 2<sup>nd</sup> International Conference on Plasma Theory and Simulations (PTS-2022)

**Duration:** 20<sup>th</sup> - 22<sup>nd</sup> June,

2022

**Topic:** Parametric Analysis on Growth

of Nitrogen-Doped Nanocone with Graphitic

wings

**Organizer:** International Conference on Plasma Science and Applications

(ICPSA2021)

Date: 30<sup>th</sup> December, 2021

#### Prof. A. S. Rao

Topic: Role of Photonics in Biology

Organizer: School of Biosciences. Padmavathi Mahila University, Tirupati

Date: 25<sup>th</sup> June, 2022

#### Dr. Bharti Singh

#### Topic:

Two Dimensional Material: Enhancing Mechanical Energy Harvesting

**Organizer:** Graphene Theme symposium of MRSI-India

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

2021

# Prof. Nitin Kumar Puri

**Topic:** The Inculcation of Scientific

**Temper:** Need and Ways

Organizer: Maharshi Valmiki College of Education, University

of Delhi Date: 21st April, 2022

#### **Applications** in science and technology

**Topic:** Photonic

Organizer: School of Sciences, Gitam University, Hyderabad

**Date:** 8<sup>th</sup> July, 2022

#### Prof. Rishu Chaujar

#### Topic:

MOSFET and NWFET for BioSensing Applications

Organizer: WECON-2022, Chitkara University, Chandigarh

**Date:** 20<sup>th</sup> – 21<sup>st</sup> May, 2022

**Topic:** Gas Sensing Applications based on MOSFETs and Nanowire **FETs** 

Organizer: FDP, Department of Electronic Science. University of Delhi

**Date:** 25<sup>th</sup> - 29<sup>th</sup> July 2022

#### Dr. Mukhtiyar Singh

**Topic:** Quantum Information Science

**Organizer:** department of Physics, Dayanand College, Hisar

Date: 21st April, 2022

4. ACADEMIC DEPARTMENTS

#### Dr. Mohan Singh Mehata

**Topic:** 0D and 2D Nanostructures and their Applications

Organizer: 9<sup>th</sup> National Conference on Nanoscience and Instrumentation Technology, Department of Physics, National Institute of Technology Kurukshetra, Haryana

**Date:** 20<sup>th</sup> -21<sup>st</sup> November, 2021

#### Topic:

Photoluminescence spectroscopy: Fundamentals and applications

**Organizer:** Department of Physics, M.B. govt. P.G. College, Haldwani, Nainital Uttarakhand

**Date:** 10<sup>th</sup> December, 2021

**Topic:** Nanoscience and Instrumentation Technology

Organizer: Physics department, NIT, Kurukshetra Duration: 20<sup>th</sup> - 21<sup>st</sup> November, 2021

# Teachers/Staff/Students who Received Awards, Recognition, and Fellowships at State, National and International Level from Government, and Recognised Bodies during the Current Year

Following Faculty members have received Research Excellence Award for Excellence in Research, DTU, Delhi on 3<sup>rd</sup> March, 2022.

- Prof. Rishu Chaujar
- Prof. Suresh C. Sharma
- Prof. Rinku Sharma
- Prof. A. S. Rao

- Prof. Nitin Kumar Puri
- Prof. Vinod Singh
- Dr. Mohan Singh Mehata
- Dr. M. Jayasimhadri
- Dr. Mukhtiyar Singh
- · Dr. Yogita Kalra

Grants for Research Projects Sponsored by Non-government Sources such as Industry, Corporate Houses, International Bodies, Endowments, and Chairs in the Institution

 Dr. Bharti Singh received a grant of ₹ 6,50,000 under the DST-Inspire Faculty Award.

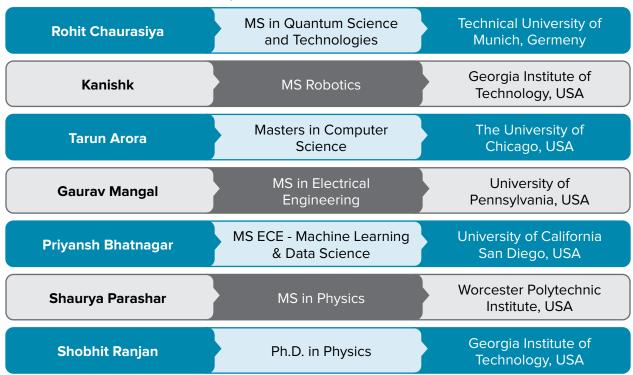
# Number of Collaborative Activities for Research, Faculty Exchange, and Student Exchange

 Dr. Mohan Singh Mehata, Collaboration with the department of Applied Chemistry and Institute of Molecular Science, Center for Emergent Functional Matter Science, National Yang-Ming Chiao Tung University, Taiwan through a joint Ph.D. student (from 2020 - present).

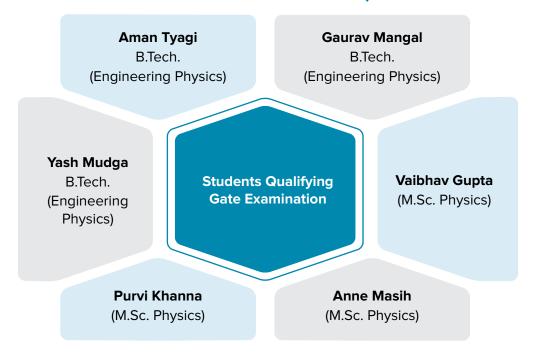
- Dr. Mohan Singh Mehata, Collaboration with Institute of Chemical Physics, Russian Academy of Science, Moscow, Russia (from 2017 - present).
- Dr. Mohan Singh Mehata, Collaboration with Kumaun University, Nainital (from 2017- present).
- Dr. Mohan Singh Mehata, Collaboration with NIT Kurukshetra, Kurukshetra, Haryana (from 2019 - present).
- Dr. M. Jayasimhadri, Research Collaboration with NIT, Warangal, Telangana (from 2019 - present).
- Dr. Bharti Singh, collaboration with the Institute of Physics, Johannes Gutenberg University Mainz, Germany.

# Details of Students Progression to Higher Education (Previous Graduating Batch) (the Current Year)

**B.TECH - ENGINERRING PHYSICS, DEPARTMENT OF APPLIED PHYSICS** 



Students Qualifying in State/National/International Level Examinations during the Current Year (eg: NET/SLET/GATE/GMAT/CAT/GRE/TOEFL/Civil Services/ State Government Examinations)



**Students** (B.Tech., Engineering Physics) qualifying in state/ national/international level examinations

Aman Tyagi, JAM and JEST

Gaurav Mangal, GRE and TOEFL

Rohit Chaurasiya, IELTS

Shobhit Ranjan, IELTS

Tarun Arora, GRE and TOEFL

Priyansh Bhatnagar, GRE and TOEFL

Kanishk Cleared, IELTS

## Students Provided with Financial **Support to Attend Conferences /** Seminars / Symposia / Workshops / **Short Term Course / Guest Lecture**

- Kanishk received a grant of ₹ 35000/- for attending the "International Mechanical Engineering Congress & Exposition 2021", organized by the American Society of Mechanical Engineers on 5<sup>th</sup> November, 2021.
- Rohit Chaurasiya received a grant of ₹ 9000/- for attending the "IEEE 5 NANO 2022" Conference, organized by Mangalam College of Engineering on 28th April, 2022.

**Details of PDPs/ Conferences/** Seminars / Symposia/ Workshops / **Short Term Course/Guest Lecture/ GIAN / TEQIP / Administrative Training Programmes organized** by the Department for Teaching and Non-teaching Staff during **Current Year** 

- Prof. Rishu Chaujar participated as Organizing Committee Member for "International Women's Day", on 8<sup>th</sup> March, 2022 at DTU, Delhi.
- Dr. M. Jayasimhadri participated as Convener for Webinar on "Research Opportunities and Schemes" on 8th February, 2022 at DTU, Delhi.

- Dr. M. Jayasimhadri participated as Convener for Webinar on "SANKALP for your career" on 23<sup>rd</sup> March, 2022 at DTU, Delhi.
- Prof. Nitin Kumar Puri participated as Organizing Committee Member for "International Women's Day", on 8<sup>th</sup> March, 2022 at DTU, Delhi.
- Prof. Nitin Kumar Puri participated as Organizing Committee Member and Associate Dean, for "Exploring Engineering 2022 for Govt. School Students" at DTU, Delhi during 20<sup>th</sup> -25<sup>th</sup> June, 2022.
- Dr. Bharti Singh participated as coordinator HRDC, for "National Science Day Lecture" on 28<sup>th</sup> February, 2022 for institute faculty, staff, and students.

Number of Functional MoUs with Institutions of National, International Importance, Other Universities, Industries, Corporate Houses etc. during the Last Five Years

 DTU, Delhi signed an MoU with CSIO Chandigarh on 11<sup>th</sup> February, 2020.

## Details of Teachers Receiving Seed Money for Research in Current Year (INR in Lacs)

- Dr. Amrish K. Panwar received a grant of ₹ 4,50,000/- from DTU, Delhi (continued from 2019).
- Dr. Renuka Bokolia received a grant of ₹ 4,83,000/- from DTU, Delhi (continued from 2019).
- Dr. Richa Sharma received a grant of ₹ 2,88,000/- from DTU, Delhi (continued from 2019).

# 4.4 DEPARTMENT OF **BIOTECHNOLOGY**



**Prof. Pravir Kumar** HoD

#### **ACADEMIC PROGRAMMES**

M.Sc. B.Tech. Biotechnology **Biotechnology** Intake : **77** Intake: 60 Admitted: 51 Admitted: 73 M.Tech. M.Tech. Industrial **Bioinformatics** Biotechnology Intake: 25+5 Intake: 25+5 Admitted: 21 Admitted: 8 Ph.D.: 9

#### **LABORATORIES**

The department state-of-thehas manv art laboratories, viz. Nano **Bioelectronics** Laboratory, Functional Genomics and Molecular Neurosciences Laboratory, Environmental Biotechnology Laboratory, Plant Molecular Biology Laboratory, Complex Systems and Genome Informatics Laboratory, Biochemistry Laboratory, Immunotherapeutic Laboratory and Computational Biology Laboratory.

#### **ACHIEVEMENTS**

· Journal Publications 128

Conference Publications

50

#### **SALIENT FEATURES**

The main objective of the department is to provide academic training and conduct research in the interdisciplinary areas of Biotechnology with particular emphasis on extending the knowledge generated from these studies towards the development of technologies of commercial significance. Research interests of the department include Nano Bioelectronics, Neurobiology, Genome Informatics, Immunotherapeutic, Plant and Molecular Biology Environment Biotechnology.



#### **Professors: 3**

- Prof. Pravir Kumar, HoD, Former Dean (Alumni Affairs), Post-Doctoral Research Associate and Faculty/Adjunct Faculty, Tufts university School of Medicine (2007-2016), Areas of Interest: Neuroscience, Molecular Medicine. Functional Physiology, Genomics, Proteomics, Vascular Biology, Medical Biotechnology and Drug Screening.
- Prof. Jai Gopal Sharma, Former Head, Post Doc., Areas of Interest: Aquaculture, Industrial Biotechnology, Bioenergy, Environmental Biotechnology, Amino Acids, Fatty Acids, Biofuel and Medicinal Chemistry of Plants.

• Prof. Yasha Hasija, Associate Dean (Alumni Affairs), Areas of Interest: Genome Informatics Human Disease Genomics, and Interatomic, Genome Annotation, Integration of genomescale data for Systems Biology and Personalized Genomics.

# **Adjunct Professors: 1**

Prof. Bansi D. Malhotra, **SERB** Distinguished Fellow. Ex-Professor (Reemployed) and Former Head, Post Doc., Areas of Interest: Nano Biotechnology, Biosensors, Flexible Electronics, and Biofuel Cells.

4. ACADEMIC DEPARTMENTS

#### **Assistant Professors: 2**

- Dr. Asmita Das, Ph.D., Post Doc. Areas of Interest: Cancer Immunotherapeutic, Cellular and Molecular Immunology and Immunoinformatics.
- Dr. Navneeta Bharadvaja, Ph.D., Areas of Interest: Medicinal Plant Biotechnology, Phytoremediation and Algal Biofuels.



Nanobioelectronics Lab

### **Achievements of the Department**

The department of Biotechnology has been continuously engaged in a research-oriented approach towards concept development. Our courses have been regularly modified in order to develop new skill development and translational courses for better employability. We are engaged in undertaking several projects sponsored by extramural as well as intramural funding. Our department has published more than 125 papers in the current year in several high impact factor journals. Our students have presented their work in several

international and national conferences and have been awarded Best Poster awards as well. Faculty of our department has been invited to deliver plenary lectures in several national and international forums. Our students have successfully graduated and taken up positions in several lvy League colleges and prestigious institutions for higher education. Our department has achieved 100% placement in the current academic year. Sports and extracurricular activities are also taken very seriously and many students have achieved national level awards. department organizes regular interactive talks and expert lecture series.

### **Participation in Professional Development Programs by Faculties**

Name of Faculty	Course/ Programme	Торіс	Organizer	Duration
Dr. Navneeta Bharadvaja	FDP	ICT Tools for Professional Development and Learning	Kamla Nehru Vishwavidyalaya, Nagpur	24 <sup>th</sup> - 28 <sup>th</sup> May, 2022
Dr. Smita Rastogi Verma	STP	NBA accreditation Procedure	NITTTR, Chennai at DTU	6 <sup>th</sup> - 8 <sup>th</sup> June, 2022
Dr. Asmita Das	FDP	Research Methodology and Online teaching	IIT Guwahati	17 <sup>th</sup> - 22 <sup>th</sup> January, 2022
Dr. Kriti Bhandari	STP	NBA accreditation Procedure	NITTTR, Chennai at DTU	6 <sup>th</sup> - 8 <sup>th</sup> June, 2022
Dr. Prakash Chandra	FDP	Clean Energy Manufacturing: Transformation for Sustainable Development	DTU, Delhi	4 <sup>th</sup> - 8 <sup>th</sup> October, 2021

# Faculty Visit to Other Institutions for Expert Lectures and Other Academic Works

- Prof. Pravir Kumar (2022) delivered a talk on "Protein mis-folding, aggregation in neurodegenerative disorders and its reversal through biomolecules", Recent trends in Brain research: Unlocking the mysteries IBRO symposium in collaboration with IAN Delhi Chapter at department of physiology and promotive health, Institute of Home Economics, University of Delhi, India during 22<sup>nd</sup> 23<sup>rd</sup> March, 2022.
- Prof. Pravir Kumar (2022) delivered a talk on "Proteinopathy and UPS machinery in neurodegenerative disorders: biomolecules mediated therapeutics", SNCI chapter meeting, Neurochemical Legacy of Neurological, Disorders: Brainstorming of Novel Approaches on 9<sup>th</sup> March, 2022 at Jamia Hamdard University.
- Dr. Asmita Das presented an online lecture on "NK cells, a key rung in development of immunotherapeutics as combinatorial cancer therapy", organized by School of Health

- 11<sup>th</sup> April, 2022.
- Prof. Jai Gopal Sharma delivered a lecture on "Third world war would be for water" at UGC-HRDC. Jodhpur for the theme "Redefining, Rejuvenating and Re-skilling IPR", on 22<sup>nd</sup> February, 2022.
- Prof. Jai Gopal Sharma delivered an invited talk on "Importance of e-waste management and necessity of general cleanliness", at Software Technology Parks of India, Noida for the theme "Swachhta Pakhwara" on 15<sup>th</sup> February. 2022.
- Science & Technology, IIT Guwahati on Prof. Jai Gopal Sharma delivered a lecture on "Water quality degradation and its impact on aquatic environment" Online Refresher Course on Environment Studies (IDC) organized by UGC Human resource development centre (HRDC), Sambalpur University on 15<sup>th</sup> November, 2021.
  - Prof. Jai Gopal Sharma delivered a lecture on "Redefining quality research excellence" for UGC HRDC Refresher Course Quality Research and Teaching Methodology on 11th November, 2021 organized by JNV University, Jodhpur, Rajasthan, India.

#### **Students Pursuing Higher Education** Vidushi Aggarwal Double Masters (M. Tech. Biological Engineering at IIT **Lalit Mohan** Gandhi nagar, India and MS **Anshul Gupta** Ph.D. at National Material Science at Japan RWTH Aachen University of Advanced Institute of Science University and Technology, Japan Singapore Mehar Sahu **Anshika Srivastva** Ph.D. at DTU **NYU University Animan Tripathi** Raksha Anand **Saksham Garg** Ph.D. Georg-August,-JRF at IIT-Delhi Heidelberg University University of Göttingen Ritika Luthra **Tarunya Menon NYU University NYU University**

# Capability Enhancement and Development Schemes

 Dr. Asmita Das organized a talk (online) on "Converting innovation into a startup" on 29<sup>th</sup> July, 2022.

# **Teachers Receiving Seed Money** for Research

 All faculty received seed money for consumables as per departmental grant allocation.

### **Details of Awards for Innovation Won by the Department**

#### Faculty members Research Excellence Award, DTU 3<sup>rd</sup> March, 2021

- Prof. Pravir Kumar
- Prof. Jai Gopal Sharma
- Prof. Yasha Hasija
- Prof. Bansi Dhar Malhotra
- Dr. Navneeta Bharadvaja
- Dr. Prakash Chandra
- Dr. Kirti Bhandari

#### Ph.D. Scholars Research Excellence Award, DTU 3<sup>rd</sup> March, 2021

- · Ms. Mehar Sahu
- Mr. Rohan Gupta
- Ms. Smita Kumari
- Mr. Navneet Chaudhary
- Mr. Lakhan Kumar
- Ms. Ritika Luthra
- Ms Shreeja Datta
- Ms. Simran Kaur

#### Poster Presentation Award

Ms. Neha Tiwari Ph.D. scholar Third Prize (AAEBSD-2021) 05<sup>th</sup> - 7<sup>th</sup> August, 2021.

# 4.5 DEPARTMENT OF **CIVIL ENGINEERING**



Prof. Vijay Kumar Minocha HoD

#### **ACADEMIC PROGRAMMES**

M.Tech. Geotechnical **Engineering:** Intake: 25+5 Admitted: 19

**Hydraulics & Water Resources Engineering:** Intake: 24+5 Admitted: 8

**Structural Engineering:** Intake: 25+5 Admitted: 25

> **Geo-informatics:** Intake: 18+5 Admitted: 5

B.Tech. **Civil Engineering:** Intake: **152** Admitted: 151

> Civil Engg. (Cont. Edu.): Intake: 60 Admitted: 22

> > Ph.D.: 27

#### **LABORATORIES**

The department is well equipped with laboratories related to Structural Engineering, Concrete testing, Soil Mechanics, Highway Engineering, Remote Sensing & GIS, Surveying, Transportation Engineering, Fluid Mechanics, and Hydraulics Laboratories.

#### **ACHIEVEMENTS**

Journal Publications

63

**Conference Publications** 

49

#### SALIENT FEATURES

Traditionally, Civil Engineering has played an important role in improving the civic life of society by harmonizing the natural resources available on earth. Some of the major areas in the field of Civil Engineering are design and construction of various structures like bridges, buildings, roads, tunnels. and dams, developing new construction technologies, Design and development of Foundation systems, Geotechnical Engineering, Traffic Transportation and Engineering, surveying, GIS & Remote Sensing, and Hydraulics & Water Resources Engineering. Besides the basic and engineering sciences, the curriculum in Civil Engineering covers various professional subjects structures. on foundations, construction, works management and cost, transportation engineering, irrigation engineering, hydraulics, environmental engineering, earthquake technology, etc.



#### **Professors: 15**

- Prof. Vijay K. Minocha (HoD), B.E. (IIT Roorkee), M.Tech. (IIT Kanpur), Ph.D. (Delhi University), Areas of Interest: Statistical Techniques, Optimization, Modeling and Al application in water and Environmental Engineering.
- **Prof. Nirendra Dev,** B.Tech., M.Sc. (Engg.), Ph.D., Structural Engineering. Areas of Interest: Structural Dynamics, Finite Element Method. Disaster Management, High Strength Nano Composites, Concrete Technology.
- Prof. Anil Kumar Sahu, B.E., M.E., Ph.D., Area of Interest: Geotechnical Engineering.
- Prof. Ashutosh Trivedi, B.Sc. (Engg.), M.Tech.. Areas of Interest: Civil Engineering, Geotechnical Engineering, Rock Mechanics, Soil Dynamics.
- Prof. Ashok Kumar Gupta, B.Sc. Univ.), B.Tech. (Rohilkhand (Hons)

- (Avadh Univ., KNIT Sultanpur), M.Tech. (Kurukshetra Univ., REC Kurukshetra), Ph.D. (IIT Bombay), Areas of Interest: Geoenvironmental Engineering, Ground Improvement Techniques, Stability of Tunnels, Settlement of Foundations.
- Prof. K. C. Tiwari (Retd. Col), M.E. (CAD), Ph.D., Areas of Interest: Geoinformatics and its applications in Civil Engineering, Disaster management, Optical Microwave remote sensing, Hyperspectral and SAR data processing. Camouflaged Target detection, Super resolution mapping, Satellite Image Processing Artificial intelligence.
- Prof. Amit Kumar Shrivastava, B.E., M.E., Ph.D., Areas of Interest: Geotechnical Engineering, Rock Mechanics, Pile Foundation, Geo Environmental Engineering.
- Prof. Rakesh Kumar, M.Tech., Ph.D., Areas of Interest: Hydraulics and Water Resources: Model studies through CFD softwares.

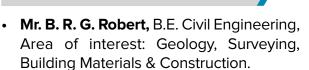
- Prof. Alok Verma, M.Tech. (Structural Engineering), Ph.D., Areas of Interest: Earthquake technology and use of fuzzy logic and neural networking in the area of durability studies.
- Prof. Awadhesh Kumar, M.E., (CAD) [UoR;R], Ph.D., Areas of Interest: Cementitious Products, Tall Buildings and Non-Linear Analysis using Finite Element Method.
- Prof. Naresh Kumar, M.Tech., (NIT, Kurukshetra); Ph.D. (University of Delhi), Areas of Interest: Deep Foundations; Experimental testing on load carrying capacity of Innovative Piles; IPR Laws.
- Prof. S. Anbukumar, B.E. (Civil), M.Tech. (IIT Madras), Ph.D. (DTU), Areas of Interest: Fluid Mechanics, Hydraulics and Water Resource Engineering.
- Prof. Raju Sarkar, B.E., M.E., Ph.D., Areas of Interest: Geotechnics for Natural Disaster Mitigation, Soil-Structure Interaction, Environmental Geotechnology, **Pavement** Geoteachnology, Ground Improvement technique, Numerical Modeling.
- Prof. Munendra Kumar, B.E. M.E., Ph.D (IIT Delhi), Areas of Interest: Fluid Mechanics, and Hydraulics.
- Prof. T. Vijaya Kumar, B.E., M.E., Ph.D., Areas of Interest: Environmental Engineering, Fluid Mechanics & Hydraulics.

#### **Associate Professors: 6**

• Mr. G. P. Awadhiya, B.E. Civil, M.Tech., Areas of interest: Structural Engg., Structural Dynamics and Earthquake Engineering, Finite Element Method of Structural Analysis, Constitutive Material Modeling, and Pre-Stressed Concrete Design.

- Mr. Narad Muni Prasad, M.Sc. Civil (Transportation). Area of interest: Pavement Engineering.
- Mr. Susheel Kumar, B.Tech., M.Tech., Areas interest: Traffic of and Transportation Engineering.
- Mr. A. R. Kongan, B.E., M.E., (Soil Mechanics & Foundation Engg.), Areas of interest: Structural Engineering and Transportation Engineering/Prestressed Concrete. Hiah Rise Buildings, Collapsible and Expansible soils.
- Dr. Shilpa Pal, B.E., M.E., Ph.D. (Structure Engineering IIT Roorkee), Areas of interest: Seismic Analysis of Dam and Slope Stability Studies, Disaster Risk Reduction Studies, Biofortified Concrete, Green Material in Construction.
- Dr. Pradeep K. Goyal, B.E., M.E., Ph.D. (IIT Delhi), Areas of interest: Cyclone Disaster Mitigation, Microzonation, Hazard analysis and risk assessment, reliability analysis, soft computing techniques, materials, rural housing.

### **Assistant Professors: 4**



- Dr. Bharat Jhamnani, B.E., M.E. Ph.D., Area of interest: Hydraulics Engineering.
- Dr. Ritu Raj, B.Tech. (NIT Raipur), M.Tech. (NIT Warangal), Ph.D. (IIT Roorkee), Areas of interest: Structural Engineering, Wind Engineering.
- Mr. Hrishikesh Dubey, B.E., M.Tech., Areas of interest: Structure Engineering, Earthquake Engineering. (On Study Leave)

# Detail of Teachers Attending PDPs, Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes

#### **Prof. Munendra Kumar**

Attended FDP on NBA Accreditation Procedures

**Organizer :** DTU, Delhi **Duration :** 6<sup>th</sup> - 8<sup>th</sup> June,

2022

Delivered Lecture on Structural Safety Audit to improve Earthquake Resiliency of lifeline Buildings and Upcoming Construction

Organizer: DTU, Delhi Duration: 25th - 27th May,

2022

#### Prof. A. K. Shrivastava

Attended FDP on NBA Accreditation Procedures

Organizer: DTU, Delhi Duration: 6<sup>th</sup> - 8<sup>th</sup> June,

2022

#### Dr. Shilpa Pal

Attended National Level Workshop on "NAAC Accreditation Process

**Organizer :** IAE, Hyderabad

**Duration :** 25<sup>th</sup> - 27<sup>th</sup> May,

2022

Attended FDP on NBA Accreditation Procedures

Organizer: DTU, Delhi Duration: 6<sup>th</sup> - 8<sup>th</sup> June,

2022

#### Prof. T. Vijaya Kumar

Attended workshop on Leadership excellence for academic development (LEAD)

**Organizer :** NIT, Surathkal **Duration :** 12<sup>th</sup> - 16<sup>th</sup> July,

2022

Course Completed on An introduction to climate change Science, Politics and Impacts

Organizer: NIT, Surathkal Duration: 16th - 27th May,

2022

Attended Workshop on Teaching science of Happiness

**Organizer:** IIT Khargpur **Duration:** 14<sup>th</sup> -16<sup>th</sup> May,

2022

#### Dr. Pradeep K. Goyal

Attended Course on Wind Loads and Effects on Structures

Organizer: CSIR-SERC,

Chennai

**Duration :** 8<sup>th</sup> - 10<sup>th</sup> December, 2021

#### Dr. Ritu Raj

Attended FDP on NBA Accreditation Procedures

Organizer: DTU, Delhi Duration: 6<sup>th</sup> - 8<sup>th</sup> June,

2022

#### Prof. S. Anbukumar

Attended five-days Faculty Development Program (online) on "Sustainable Product Design and Manufacturing

**Organizer:** SMVDU,

Jammu

**Duration :** 10<sup>th</sup> - 14<sup>th</sup> January, 2022

Attended FDP on Research Essentials

**Organizer:** Chandigarh University, Punjab **Duration:** 5<sup>th</sup> February,

2022

PDP on "Materials in Civil Engineering

Organizer: VITS,

Hyderabad

Duration: 21st - 26th

March, 2022

Attended FDP on NEP 2020: A Road Map for Future India

Organizer: GGSIPU,

Delhi

**Duration :** 25<sup>th</sup> - 31<sup>st</sup> October, 2021

Participated in Eco hydrology Symposium (EHS) 2022

**Organizer :** IIT, Roorkee **Duration :** 1st March, 2022

# Visit of Faculty to Other Institutions for Taking Expert Lectures/Other Academic Work

Name of the Faculty	Topic	Organizer	Duration
Dr. Shilpa Pal	Conceptual Design of Earthquake Resistant of Buildings	DTU, Delhi	25 <sup>th</sup> - 27 <sup>th</sup> May, 2022
Dr. Shilpa Pal	Conceptual design for earthquake resistant buildings and safety measures	RIMT University, Melbourne, Australia	15 <sup>th</sup> October, 2021
Dr. Shilpa Pal	Basic Conceptual Design of Earthquake Safe Buildings	National Institute of Disaster Management (NIDM), New Delhi and Department of Civil Engineering, Andhra University College of Engineering, Visakhapatnam in association with IGS Visakhapatnam Chapter	26 <sup>th</sup> October, 2021
Prof. Raju Sarkar	Soil Exploration	CED, DTU, Delhi	25 <sup>th</sup> - 27 <sup>th</sup> May, 2022
Prof. Raju Sarkar	Disaster reduction and emergency preparedness	IASPEI Summer School	16 <sup>th</sup> - 20 <sup>th</sup> August, 2021
Prof. Raju Sarkar	Slope Stability	IGS Raipur Chapter and NIT Raipur	14 <sup>th</sup> June, 2022
Dr. Pradeep K. Goyal	Wind Loads and Effects on Structures	CSIR-SERC, Chennai	8 <sup>th</sup> -10 <sup>th</sup> , December, 2021
Dr. Pradeep K. Goyal	Cyclonic Risk and Hazard Assessment	Amity University, Noida and Amity University, Patna	7 <sup>th</sup> - 9 <sup>th</sup> October, 2021
Dr. Pradeep K. Goyal	Cyclonic Microzonation and Risk Assessment	Multidisciplinary Centre of Geoinformatics, DTU, Delhi	15 <sup>th</sup> November- 9 <sup>th</sup> December, 2021
Dr. Pradeep K. Goyal	Technical Education in Bhartiya Languages in context of NEP2020	Commission for Scientific and Technical Terminology (Department of Higher Education) Ministry of Education, Government of India	22 <sup>nd</sup> December, 2021
Dr. Pradeep K. Goyal	Importance of Technical Education in Bhartiya Languages	Commission for Scientific and Technical Terminology (Department of Higher Education) Ministry of Education, Government of India	19 <sup>th</sup> January, 2022
Dr. Pradeep K. Goyal	Cyclonic Micronation and its importance in disaster management	Deptt. of Civil Engg., DTU, Delhi & National Institute of Disaster Management	5 <sup>th</sup> – 7 <sup>th</sup> April, 2022
Dr. Pradeep K. Goyal	Risk Assessment	Manav Rachna International Institute of Research and Studies, Faridabad	23 <sup>rd</sup> - 24 <sup>th</sup> June, 2022
Prof. T. Vijaya Kumar	Heartfulness way of connecting with One's Higher self	Practic North Odisha University	7 <sup>th</sup> September, 2021
Prof. T. Vijaya Kumar	leadership excellence for academic development ( LEAD)	NIT Suratkal, Karnataka	12 <sup>th</sup> - 16 <sup>th</sup> July, 2021
Prof. T. Vijaya Kumar	Innovative Techniques in Product Design, Numerical simulation and Additive Manufacturing	University College of Engineering, Nagercoil	6 <sup>th</sup> - 10 <sup>th</sup> December, 2021

Name of the Faculty	Торіс	Organizer	Duration
Prof. A. K. Sahu	Geotechnical Aspects of Urban	National Institute of Disaster	5 <sup>th</sup> - 7 <sup>th</sup> April,
	Waste Disposal	Management, New Delhi	2022
Prof. A. K. Sahu	Waste Disposal in Delhi- Geotechnical Aspects	Department of Civil Engineering, C.B.P Engineering College, Jaffarpur, NSUT West Campus, New Delhi	6 <sup>th</sup> - 10 <sup>th</sup> September, 2021
Prof. A. K.	Sustainable & Economical		18 <sup>th</sup> - 29 <sup>th</sup> July,
Shrivastava	Concrete- Indian Case Studies		2022

#### Teachers / Staff / Students who Received Awards and Recognition at National. International Level during the **Current Year**

- Dr. Shilpa Pal has been awarded best paper Award for the paper Impact of ureolytic and non-ureolytic bacteria on self-healing of artificial cracks in biofortified concrete in the 12th International Conference on Material Processing and Characterization (ICMPC 2021), conducted bv of department Mechanical Engineering, NITTTR Chandigarh during 6th - 9th October, 2021.
- M.Tech. Student of Dr. Shilpa Pal, Ms. Arya Sajith, won Best paper in Technical Session 6 (T6) for paper titled "Experimental validation of detection damage in concrete beam under impact load using piezo sensor" in the 3<sup>rd</sup> International Conference on "Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022)", organized by the department of Mechanical Engineering, DTU, Delhi during 8th - 9th July, 2022.
- Dr. Shilpa Pal is serving as governing council member in Indian Association of Structural Engineers and is Chairperson of Student Affairs Committee.

· Dr. Shilpa Pal is serving as Execution Committee Member in Indian Concrete Institute, Gaziabad (Western Chapter) U.P.

Teachers / Staff / Students who Received Awards and Recognition at National, International Level during the Current Year

#### Prof. A. Trivedi

**Received Research Excellence Award in 2022** 

#### Prof. Nirendra Dev

Received Research Excellence Award in 2022

#### Prof. A. K. Shrivastava

**Member of Technical Committee constituted** by MoE, Higher Education, Govt. of India, for Geotechnical Investigation of the Campus site of the Central University of Kashmir w.e.f. 12th March, 2021

#### Prof. S. Anbukumar

Received Research Excellence Award in 2022

#### Prof. Raju Sarkar

Received Research Excellence Award in 2022

#### Dr. Ritu Raj

Received Research Excellence Award in 2022

#### **Details** of Training **Programs** organized by the Department for **Teaching and Non-teaching Staff**

- Prof. Raju Sarkar organized threedays Online International Workshop on "Role of Early Warning System in Geo-Meteorological Hazards Risk Reduction" during 8th - 10th December, 2021 in collaboration with a) Commission on Education and Outreach, International Association of Seismology and Physics of the Earth's Interior (IASPEI), b) South Asia Alliance of Disaster Research Institutes (SAADRI), c) National Science and Technology Center for Disaster Reduction (NCDR), Taiwan. and d) National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Govt. of India.
- Prof. Raju Sarkar and Dr. Shilpa Pal organized a program on "Seismic Structural Safety Audit of Structures" organized by DTU, Delhi and sponsored by Ministry of Home Affairs, Govt. of India during 23<sup>rd</sup> - 27<sup>th</sup> November, 2020.

- Prof. T. Vijaya Kumar organized an online three-days workshop on Post Covid-19 Recovery and Immunity through Yoga, Meditation and breathing during 9<sup>th</sup> -11<sup>th</sup> July, 2021.
- Prof. T. Vijaya Kumar organized oneweek FDP on "ethics and Values in technical education in the context of NEP-2020" during 15<sup>th</sup> - 19<sup>th</sup> April, 2021.
- Prof. T. Vijaya Kumar organized an interactive session on "Science of Happiness" with honourable VC, senior faculty members, Deans etc with Dr S S Rekhi, CEO R -systems on 4th May, 2022.
- Prof. T. Vijaya Kumar organized an expert lecture for the benefit of students by Dr. Sammdu Chetri on Gross national happiness on 22<sup>nd</sup> March, 2022.
- Dr. Pradeep K. Goyal organized a Conference cum Training Programme on "Disaster Risks, Climate Change and Resilient Development" jointly by Deptt. of Civil Engg., DTU, Delhi & National Institute of Disaster Management, Delhi during 5<sup>th</sup> - 7<sup>th</sup> April, 2022.

# 4.6 DEPARTMENT OF **COMPUTER SCIENCE AND ENGINEERING**





Prof. Rajni Jindal HoD

**Prof. Vinod Kumar** HoD

#### ACADEMIC PROGRAMMES

B. Tech.

Intake: 482

Students Admitted: 482

M. Tech. (CSE)

Intake: 25+5

Students Admitted: 22

M. Tech. (AI)

Intake: 30+5

Students Admitted: 27

Ph.D.

Scholars Research: 13

#### **LABORATORIES**

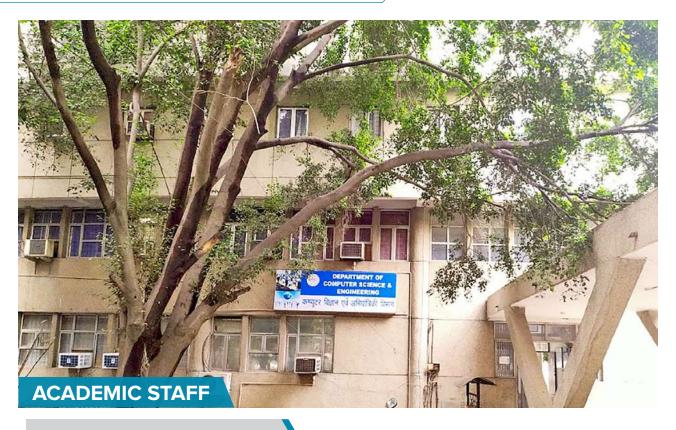
Department has developed state- of-the-art laboratories in the various fields of Computer Engineering- Computer Architecture Lab, Computation Lab and programming Lab, Artificial Intelligence Lab, Linux Android Network Systems Lab, Samsung Digital Research Academy Lab and Big Data Lab, many others.

#### **ACHIEVEMENTS**-

<ul> <li>Journal Publications</li> </ul>	47
<ul> <li>Conference Publications</li> </ul>	30
<ul> <li>Book Chapters</li> </ul>	2
• Books	1

#### 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 and technology incubation. The curriculum defined, lays greater emphasis on design principles and development system software operating systems, Database management systems, data mining, computer graphics and networks. Currently the department offers Doctorate, Under-Post-graduate & graduate courses in fields Computer Engineering. The department also has an 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.



#### **Professors: 7**

- **Prof. Vinod Kumar (HoD),** B.E., M.Tech., Ph.D., Area of Interest: Computer Network.
- **Prof. Rajni Jindal,** M.C.A., M.E., Ph.D., Areas of Interest: Database Systems, Data Mining and Operating Systems.
- Prof. Daya Gupta, M.Sc., Post M.Sc. Diploma (Computer Sc.), Ph.D., Areas of Interest: Software Engineering, Artificial Intelligence, Data Mining and Security.
- **Prof. Manoj Kumar,** B.Tech., M.Tech., Ph.D., Area of Interest: Information Security.
- Prof. Anil Singh Parihar, B.Tech.. M.E., Ph.D., Areas of Interest: Pattern Recognition, Computer Vision, Soft omputing, Image Processing, Evolutionary Computing, and Biometric.

- Prof. Rahul Katarya, B.Tech., M.Tech., Ph.D., Areas of Interest: Big Data Analytics, Social Networks Analysis, Human Behavior, Multimedia Systems, Internet Technologies, Web Mining.
- Prof. Shailendar Kumar, B.E., M.Tech., Ph.D., Areas of Interest: Database Systems, Datamining, Big Data Analytics, Machine Learning, Information Security, Compiler Construction. Computer Network.

#### **Associate Professors: 1**

Dr. Aruna Bhat, B.Tech., M.Tech., Ph.D., Areas of Interest: Machine Learning and Pattern Recognition, Campus Incubators.

#### **Assistant Professors: 14**

- Dr. Rajesh Kumar Yadav, B.E., M.Tech., Ph.D., Areas of Interest: Mobile Computing, Wireless Sensor Network, Computer Networks, Theory of Computation, PCA.
- Dr. Rohit Beniwal, B.Tech., M.Tech., Ph.D., Areas of Interest: Social Web, Semantic Web, Software Engineering, Machine Learning.
- Ms. Minni Jain, B.Tech., M.Tech., Pursuing Ph.D., Areas of Interest: Natural Language Processing, Sentiment Analysis, Information Security.
- Mr. Nipun Bansal, B.Tech., M.Tech., Pursuing Ph.D., Areas of Interest: Information Security, Biometric Security, Network Security.
- Dr. Sanjay Kumar, B.Tech., M.Tech., Ph.D., Areas of Interest: Social Network Analysis, Database Systems, Data Science, Information Security and Algorithms.
- Dr. Prashant Giridhar Shambharkar, B.E., M.Tech., Ph.D., Areas of Interest: Data Mining, Real Time Systems, Programming Fundamentals, Mobile Health Monitoring.
- Mr. Anurag Goel, B.Tech., M.Tech. (Gold Medalist), Ph.D. (Pursuing from IIIT Delhi), Areas of Interest: Machine Learning, Deep Learning, Deep Clustering, Graph Algorithms.

# **Programmer: 1**

 Dr. Manoj Sethi, M.E., LMCSI, Ph.D., Specialization: DBMS, DWDM, Machine Learning.

- Mr. Kavinder Singh, B.Tech. M.Tech., Ph.D. (pursuing), Areas of Interest: Digital Image processing, Computer Vision, Pattern Recognition, Deep learning, Machine learning.
- Dr. Rajeev Kumar, B.Tech., M.Tech., Ph.D., Post-Doc Areas of Interest: Steganography, Reversible data hiding, Wireless Sensor Networks, Deep Fakes.
- Dr. Pawan Singh Mehra, B.E., M.Tech. (Hons), Ph.D., Areas of Interest: Internet of Things, Wireless Networks, Cryptography Security, and Quantum Computing.
- Ms. Anukriti Kaushal, B.Tech., M.Tech., Ph.D. (Pursuing), Areas of Interest: Data structures and Algorithm, Network and Information Security, Machine Learning, Deep learning, Recommender system.
- Dr. Ashish Girdhar, B.E., M.Tech., Ph.D., Areas of Interest: Image processing, machine learning.
- Ms. Gull Kaur, B.Tech. M.Tech., Ph.D. (Pursuing), Areas of Interest: Artificial Intelligence, Machine Learning and Deep Learning.
- Ms. Garima Chhikara, B.Tech. M.Tech., Ph.D. (Pursuing), Areas of Interest: Algorithms, Computer Vision, Deep Learning.

### **Achievements of the Department**

- Mr. Rohit Chadda (DCE Alumni, B.E. 2005, Computer Engg) has been featured among Top Tech CEOs of the decade (2010-2020) in India and was featured among Fortune 40 under 40 in 2015. He was also named Entrepreneur of the Year 2016 by ASSOCHAM (The Associated Chambers of Commerce and Industry of India).
- Coding Minutes, an Online learning platform bootstrapped by Prateek Narang (DTU Alumnus, B.Tech. 2016, and Computer Engg.) is acquired by Scalar Academy (Interview Bit) for \$1 million in an all-cash deal.
- 7 students qualified GATE, 10 students cleared CAT, 11 students scored good rank in GRE, 10 students cleared TOEFL and 1 student cleared IELTS.
- 3 students joined MBA programme in IIMs and 8 students joined MS programme in world's top ranked universities.
- Total 2082 full time placement offers are made by the companies.
- Highest stipend of ₹ 2 Lacs/month is offered by Sprinklr.

- For internships, average stipend offered is ₹ 59,000/month.
- Many B.Tech. students have published papers in reputed international journals/ conferences.

# Teachers Provided with Financial Support to Attend Conferences, Seminars, etc.

- Mr. Anurag Goel received ₹ 1,950/- for attending four-weeks online induction Training/Orientation Program at University of Delhi.
- Mr. Anurag Goel received ₹ 1,450/- for attending two-weeks online refresher course on Advanced Research Methodology at Ramanujan College, University of Delhi.
- Dr. Pawan Singh Mehra, Dr. Rajeev Kumar, Dr. Ashish Girdhar and Ms. Anukriti Kaushal received ₹ 10,000/- (each) for attending Eight Online Modules MOOC courses organized by NITTTR.
- Ms. Anukriti Kaushal received ₹ 1,450/for attending two-weeks online refresher course on Next Generation Technologies at Ramanujan College, University of Delhi.

# Participation in Professional Development Programmes by Faculties

Name of the Faculty	Program	Organizer	Duration
Dr. Rajeev Kumar	ATAL FDP on "Block chain Technology and Crypto currency"	NIT Agartala	23 <sup>rd</sup> - 27 <sup>th</sup> August, 2021
	Webinar titled "Copyright Issues in Academic Research"	JDMC	3 <sup>rd</sup> August, 2021
	STC on "Cyber Forensic and Information Security"	NIT Jalandhar	16 <sup>th</sup> - 20 <sup>th</sup> December, 2021
	ATAL FDP on "Digital Forensics in Cyber Security"	CDAC	2 <sup>nd</sup> - 6 <sup>th</sup> August, 2021
Dr. Prashant Giridhar Shambharkar	FDP on NBA Accreditation Procedures	DTU, Delhi	6 <sup>th</sup> - 8 <sup>th</sup> June, 2022

Name of the Faculty	Program	Organizer	Duration
Dr. Pawan Singh Mehra	STC on Cyber Forensic and Information Security	NIT Jalandhar	16 <sup>th</sup> - 20 <sup>th</sup> December, 2021
	FDP on NBA Accreditation Procedures	DTU, Delhi	6 <sup>th</sup> - 8 <sup>th</sup> June, 2022
	Webinar titled IPR Awareness: Patents and Design Registrations	IGDTUW, Delhi	6 <sup>th</sup> December, 2021
	Course on Advanced Research Methodology	Ramanujan College, DU, Delhi	22 <sup>nd</sup> January, - 5 <sup>th</sup> February, 2022
Ms. Garima Chhikara	FDP on Machine Learning and Its Applications using Python	IIT Madras	13 <sup>th</sup> - 29 <sup>th</sup> June, 2022
	FDP on Applied Deep Learning and Computer Vision Using Python	IIT Madras	4 <sup>th</sup> - 18 <sup>th</sup> July, 2022
	Participated in National Initiative for Technical Teachers Training (NITTT) program	Ministry of Education, Govt. of India	1 <sup>th</sup> - 31 <sup>th</sup> October, 2021
Dr. Aruna Bhat	Industry - Academia Conclave on Future Perspective of Technological Development	NIT, Meghalaya	18 <sup>th</sup> - 23 <sup>rd</sup> February, 2022
	FDP on Artificial Intelligence, Robotics and Automation	Banasthali Vidyapith	9 <sup>th</sup> - 14 <sup>th</sup> March, 2022
Ms. Anukriti Kaushal	STTP on Recent Advances and Challenges in Computer Vision	DTU, Delhi	3 <sup>rd</sup> - 7 <sup>th</sup> December, 2021
Ms. Minni Jain	FDP (UGC approved)	Ramanujan College, Delhi	2 <sup>nd</sup> - 8 <sup>th</sup> December, 2021
	Eight modules of NITTTR	AICTE, Delhi	

# Faculty Visit to Other Institutions for Taking Expert Lectures and Other Academic Works

#### Dr. Prashant Giridhar Shambharkar

External Examiner at Maharaja Agrasen Institute of Technology, Rohini, New Delhi June, 2022

#### **Dr. Rohit Beniwal**

Examiner for Summer Training/ Industrial Workshop/ Certification at Maharaja Agrasen Institute of Technology, Rohini, in January, 2022

External Examiner for Summer Training/ Industrial Workshop/ Certification at HMR, Guru Gobind Singh Indraprastha University in January, 2022 Delhi in January, 2022

Examiner for "Industrial Project Viva-Voice" at Bikaner Technical University in April, 2022

External Examiner for "Summer Training/ Industrial Workshop/ Certification" at BVCOE, in January, 2022

#### Dr. Rajeev Kumar

Title: TagExDF- Explained Tagging System

Organizer: Kyungil University, Korea

Duration: May, 2022

Title: Fundamentals of Graph Analytics

Organizer: JIIT, Noida Duration: July, 2022

**Title:** Graph Partitioning Organizer: JIIT, Noida Duration: July, 2022

#### Dr. Pawan Singh Mehra

Guest Speaker in FDP

Organizer: Jaypee University, Noida

**Duration:** 13th - 17th June, 2022

Title: Quantum Computing and its

applications

Organizer: Jaypee University, Noida

Duration: 26th July, 2022

#### **Teachers** Receiving Awards, Recognition and Fellowships from **Government / Non Government Bodies:**

- Following faculty members have received Research Excellence Award for Excellence in Research in DTU, Delhi on 3rd March, 2022.
  - Prof. Shailendra Kumar
  - Prof. Rajni Jindal
  - Prof. Rahul Katarya
  - Prof. Anil Singh Parihar
  - Dr. R .K. Yadav
- Dr. Sanjay Kumar
- Dr. Rajeev Kumar
- Dr. Pawan Singh Mehra
- Dr. Ashish Girdhar
- Mr. Kavinder Singh
- Ms. Indu

# **Functional MoUs with Institutions of** National. International Importance. Other Universities, etc.

- MoU was signed between DTU and Samsung in 2019 for a period of 3 years.
- MoU between Media and Data Science Research Lab, Adobe Inc. (principal place California USA) and DTU, Delhi (Machine Learning Research Lab, Dept. CSE, Faculty Incharge Prof. Anil Singh Parihar). It will provide an excellent opportunity for the students of DTU, Delhi to work on the industry-relevant problems in the area of computer vision, NLP, and Deep Learning under joint mentorship.

#### Institutions/ Linkages with Industries for Internship, on-the-**Job Training, Project Work, Sharing** of Research Facilities

 MoU with Samsung Research India from 2019 for a period of 2 years for Lab Setup. Dr. Rajni Jindal, Dr. Divyashikha Sethia, Ms. Minni Jain participated in the linkage.

# 4.7 DEPARTMENT OF DESIGN



Prof. Ranganath M. Singari HoD

#### **ACADEMIC PROGRAMMES**

B.Des.

Intake : 123+18 Admitted : 115

M.Des. (Interaction Design)

Intake : **15** Admitted : **14** 

**B.Des.** (Product Design)

Intake : **15** Admitted : **15** 

**B.Des.** (Visual Communication Design)

Intake : **15** Admitted : **12** 

Ph.D.: 6

#### **LABORATORIES**

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

#### **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 to spotlight strengthening quality design education and usage of design 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 is recognized as a key differentiator for providing a competitive edge to products and services. It involves an integrated humanistic approach to design products; it involves an integrated humanistic approach to design products, services and systems. It seeks to delve deeper into an understanding of technological, commercial, and societal contexts 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..



#### **Professors: 1**

Prof. Ranganath M. Singari (HoD),
 B.E., M.E., D.M.S, Ph.D., Areas of
 Interest: CAD/CAM, Product Design,
 Industrial Engineering, Innovative
 Design, and Physical and Cognitive
 Ergonomics.

# **Honorary Professors: 1**

 Prof. Lalit Kumar Das, MA (Industrial Design), M.Tech., B.Tech., Areas of Interest: Industrial Design Education, Product Design, CAD, Sustainability, etc.

#### **Assistant Professors: 5**

- Mr. Neeraj Rathee, BFA, MFA, Ph.D. (Pursuing), Areas of Interest: Visual Communication, Graphic Design, Animation, and Design Research.
- Mr. Partha Pratim Das, B.Tech., M.Tech., M. Des, Ph.D. (Pursuing), Areas of Interest: UI/UX, Design Thinking, Ethnographic Research.
- Mr. Varun Singh, B.Arch, M.Arch., Areas of Interest: Visual Design, Design Theory, Art and Pedagogy, Digital Design, Storytelling, Narratives.

- Ms. Taruna Singh, B.Des., M.Des. Ph.D. (Pursuing), Areas of Interest: Accessory Design, Product, Design & Development, Craft.
- Dr. Ravindra Singh, B.Tech., M.Des., Ph.D., Areas of Interest: Universal Design, Product Design, Human Centric Design.

# **Visiting Faculty: 2**

- Mr. S.G Ranjan, Post Graduate in Print making, Areas of Interest: Art and Design.
- Mr. Arunotpal Thakur, Post Graduate in Fashion Management Studies, MBA, Areas of Interest: Design Thinking, Design Management, Fashion Design and Retail.



### **Achievements of the Department**

- "International Conference on Material and Design (ICDM)", organized by the department of Design.
- First Design Degree Show, organized by the department of Design to showcase graduating batch projects.
- Four & six weeks Internship Program 2022, organized by department of Design.
- Service Design Challenge 2022, bronze winner: monetary prize of EUR 1,500 + EUR 1,000 for the university, team members - B. Des Students: Saatvik Agrawal, Yashashvi Singh Bisht, Gurkeerat Singh, Jahnavi Rajaram, and Priyanshu Kumar.
- · Ayushi Singh, Winner, Microsoft Design Challenge 2022.
- Shitya Kashyap, Gold Medal, at MCAD, India skill.
- · Suhani Bhargavwa, Swbhiman Award, Organized by Constitution Club of India.
- Dr. Ravindra Singh invited as a jury member for National Competition 2021, organized by National Skill Development Corporation.
- Dr. Ravindra Singh participated Industrial Design Technology skill as an Expert in Asia-Pacific Best Practice Marathon 2022, organized by the Ministry of Education and Science of the Khabarovsk Territory, Russia.
- Dr. Ravindra Singh Presented paper on "Emotion Recognition for Individuals with Autism" at 24th HCI International Conference, HCII 2022, Virtual Event during 26<sup>th</sup> - 1<sup>st</sup> July, 2021.

- Varun Singh presented paper on "ODL: Impact Analysis of Online Teaching and Employability" at the National Conference on Sustainable Development and Quality of Life: Pre-requisites in Post Pandemic Society organized by UGC-SAP DRS-III, department of Sociology, University of Rajasthan, during 29th - 30th March, 2022.
- Arunotpal Thakur, invited as a jury for M. Des (Industrial Design) at the School of Planning & Architecture (SPA), New Delhi.
- Arunotpal Thakur presented 'Brand' Building' at a workshop for the Tiles & Ceramic cluster at Morbi, Gujarat, organized by the Trade Development Council of India.
- Neerai Rathee. invited quest as speaker for the launch of the School of Speacilised Education, Govt. of Delhi.
- Partha Pratim Das, invited to CIPRA 2022 to serve as Session Chair in the National Workshop on "Collaborative Innovation for Promoting Rural Abundance" at Sewagram, Maharashtra during 22<sup>nd</sup> -23<sup>rd</sup> July, 2022.
- Taruna Singh presented paper "Interplay of social responsibility and sustainability for packaging design through local innovation". Organizing Secretary of ICDM'2022 Organizing Secretary of 3D printing in product design 2022. Organizing Secretary of ICAPIE'2022.

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

Dr. Ravindra Singh

- NITTTR FDP (8 modules).
- FDP NBA Accreditations Procedures.
- Two-weeks Industrial Training at Crimson Healthcare Pvt. Ltd.
- IIC Regional Meet, Chandigarh.

Ms. Taruna Singh

Participated in PDP, NITTTR FDP (8 modules).

Mr. Neeraj Rathee

- NITTTR FDP (5 modules).
- Social Responsibility of Educational Institutes -Unnat Bharat Abhiyaan, MHRD, Govt. of India.

Mr. Partha Pratim Das

• Participated in PDP, NITTTR FDP (5 modules).

# Faculty Visit to Other Institutions for Taking Expert Lectures and Other Academic Works

#### Prof. Ranganath M Singari

- 1. Governing body member, ANDC, DU.
- 2. Chairman Production Engineering, CNC and Automation, DTTE Delhi.

#### **Dr. Ravindra Singh**

- 1. BoS member UPID, Noida.
- 2. Delivered online lecture on "Design Methodology- Finding effective solutions" in Avantika University, Ujjain.
- 3. A Jury member at the State University of P&VA Rohtak.
- 4. A Jury member at JMI University, New Delhi.
- 5. An interview panel member for Ph.D. admission by NSUT.
- A jury member and paper setter for the three selection tests for Industrial Design Technology for the World skill competition.

#### Mr. Neeraj Rathee

- A jury member and external examiner, Pt. L.C. State University of P&VA Rohtak.
- 2. A jury member and external examiner, GEH University, Dehradun.
- An interview panel member for positions namely Senior Fellow, Fellow, Associate Fellow, and Professional Consultant are to be filled by Delhi Jal Board.
- 4. An interview panel member for the Project "Youth for Education".

#### Mr. Partha Pratim Das

- Invited as jury member and external examiner, Uttar Pradesh Institute of Design, Noida.
- Delivered an online lecture on "Visualizing Human Experiences" at IIT Delhi for Professionals under Continued Education Programme.

Detail of Awards for Innovation Won by Department/Teachers/ Research Scholars/Students during the Current Year

Received Commendable

"Research Award for Excellence
in Research"

DTU, Delhi on 3<sup>rd</sup> March, 2022.

# 4.8 DELHI SCHOOL OF **MANAGEMENT**



Dr. Archana Singh HoD

#### **ACADEMIC PROGRAMMES**



#### **FACILITIES**

Delhi School of Management has access to a wide array of world class facilities that include fully equipped Computer Centre, a chain of scientifically advanced Research Laboratories, Smart Classrooms with State- of-the-Art audio and video support, a fully Centralized Library with a plethora of available volumes, an Auditorium with a capacity of over a thousand, an Open-Air Theatre, and a fully developed Sports Centre.

#### **ACHIEVEMENTS** -

 Journal Publications 30

Conference Publications 14

#### 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 vision of inculcating penchant for Innovation, Research and Experimentation in the aspiring managers. DSM aims at extending the 'sevendecade' long legacy of DCE by incubating and developing techno-managers, who are adept at identifying pertinent and critical business problems and apply their technical skills and competencies in solving those issues. In order to train its students to face the challenges of an information and knowledge driven work environment, DSM provides them with the triple E: "Education, Experience and Exposure". DSM strives to inculcate its students the 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 at developing a knowledge society by providing equitable access to the masses and broadening the span of their participation in the areas of higher education.



#### **Professors: 2**

- Prof. P. K. Suri, M.Sc. (DU), M.Tech. (IIT Delhi), Ph.D. (IIT Delhi), Areas of Interest: E-Governance, IT Management, Business Analytics.
- Prof. Rajan Yadav, MBA, Ph.D., Areas of Interest: Services Marketing, Sales and Distribution.

# **Honorary Professors: 1**

 Prof. G. C. Maheshwari, Ph.D., Areas of Interest: Finance, Accounting and Strategy.

# **Associate Professors: 3**

- Dr. Archana Singh (HoD), MBA (Finance), Ph.D., Areas of Interest: Corporate Finance, Financial Accounting, and Security Analysis.
- Dr. Saurabh Agarwal, B.E. (UOR, Roorkee), M.Tech. (IIT Delhi), MBA (OSU, USA), Ph.D. (DTU), Areas of Interest: Supply Chain Management, Reverse Logistics, Industrial Engineering, Data Analytics.
- Dr. Shikha N Khera, MBA, NET, Ph.D., Areas of Interest: Organizational Behavior, Organizational Development.

#### **Assistant Professors: 9**

- Dr. Vikas Gupta, MBA, NET, Ph.D., Areas of Interest: Knowledge Management, Innovation Management, **Business** Process Re-Engineering, CSR.
- Dr. Meha Joshi, MBA, NET, Ph.D., Areas of Interest: Organizational Development, C.R.M, Management.
- Dr. Sonal Thukral, M.Com., MBA, NET-JRF, Ph.D., Areas of Interest: Finance, International Business.
- Ms. Deepali Malhotra, M.Com. M.Phil., NET-JRF, Ph.D., Areas of Interest: Strategy Management, International Business, and Finance.
- Dr. Deep Shree, MBA, NET-JRF, Ph.D., Areas of Interest: Marketing, Not for Profit Marketing, Brand Management, and Qualitative Research.

- Mr. Chandan Sharma, B.Tech. PGDM, Pursuing Ph.D., Areas of Interest: Finance, Strategy.
- Mr. Mohit Beniwal, B.Tech., MBA, Ph.D., Areas Pursuina of Interest: General Management, Information Systems.
- Mr. Yashdeep Singh, B.E., MBA, NET, Pursuing Ph.D., Areas of Interest: Marketing Management, Information Technology Management.
- Mr. Dhiraj Kumar Pal, B.E., PGDM, Pursuing Ph.D., Areas of Interest: Marketing, Operations & SCM, Strategy.

# **Achievements of the Department**

NBA Accreditation for MBA from 2022 to 2025.

Signed an MoU with NISCI to explore the field of Data Science.

Dr. Deep Shree, got the Research Award.

**DSM** organized online webinar on "Planning for Startups: Ethical and Legal Steps".

DSM organized the HR conclave on "Managing Multi-Generational Workforce"

"Research Methodology and Introduction to Modelling Techniques", one-week e-PDP organized by DSM.

# Teachers Provided with Financial Support to attend Conferences, Seminars, etc.

- Dr. Archana Singh got a support of ₹ 5,900/- for the " $2^{nd}$  case study competition" held at AIMA, Delhi from 24th - 26th July, 2022.
- Mr. Dhiraj Kumar Pal got a support of ₹ 70,026/- for the "Machine Learning" with Business Application" held at IIM Bangalore from 23rd-28th May, 2022 and from 11th -12th June, 2022.
- Mr. Dhiraj Kumar Pal got a support of ₹ 2,000/- for the "Qualitative Research Methods using R" held at IIFT on 7th - 8th May, 2022.
- Dr. Deep Shree got a support of 200 Pound for "Mastering the Essentials of Grounded Theory" held at 'University of Oxford'.

### **Faculty Visits to Other Institutions** for Other Academic Work

 Dr. Archana delivered an online expert lecture on "Application of Financial

- Mathematics in stock market" e-workshop organized by NIT, Hamirpur.
- · Dr. Archana delivered a lecture in 20th Foundation Training Program for Scientists and Technologists at IIPA, New Delhi.
- Dr. Deepali Malhotra delivered a lecture on "Entrepreneurial Mindset: An essential skill for students", organized by SKV School.
- Dr. Shikha N Khera delivered a lecture in FDP, organized by DSM, DTU, Delhi.
- Dr. Deep Shree visited for Expert-Course Design and Development Committee meeting in IGNOU, Delhi.
- · Dr. Archana chaired a session in International Conference; ICGFBE 2021 at NIDM Delhi.
- Dr. Deep Shree participated as external panel at DMS, IIT Delhi.
- Dr. Deep Shree visited as Expert for Course Design and Development Committee meeting for the course "MMPO-003: Production / Operations management" at IGNOU, Delhi.

# Participation in Professional Development Programs by Faculties

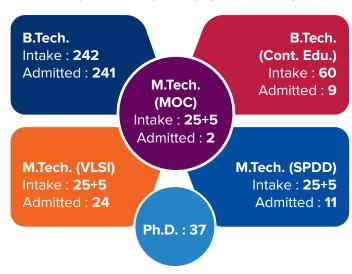
Name of the Faculty	Participated in	Organizer
Dr. Saurabh Agarwal	Beyond the Boundaries: Re-Inventing Higher Education Paradigm	GGSIP University, Delhi
	One-week online short-term training programme on "Advances in Manufacturing Systems"	MITS, Gwalior
	e-FDP	DTU, Delhi.
	E-Workshop on "Bioinformatics	DTU, Delhi.
	One-week e-FDP on Beyond the Boundaries	
Dr. Sonal Thukral	AICTE sponsored short-term training programme on "Financial Modelling"	MediCaps University, Indore.
	4 <sup>th</sup> Summer School on "Behavioral Finance"	IIIT-Allahabad.
	Online workshop on "Qualitative Data Analysis using NVIVO Software"	DEEDS, India
	Ethics and Values in Technical Education in context of National Education Policy 2020	DTU, Delhi.
	BIMTECH Case Master Development Workshop	ВІМТЕСН
	Ethics and Values in Technical Education in context of National Education Policy 2020	DTU, Delhi.
	AICTE Sponsored Short Term Training Programme on "Financial Modelling (Phase III)"	MediCaps University, Indore.
Dr. Deep Shree	"Tool for Teaching in Management"	NIT, Hamirpur
Mr. Dhiraj Kumar	e-workshop on "Data-Analysis with Python"	
Pal	Two-Days workshop on "Qualitative Research Methods using R"	IIM, Bangalore
Dr. Vikas Gupta	Teaching the science of Happiness	IIT Kharagpur.
Dr. Archana	NBA Accreditation Procedures	IQAC DTU and NTTTR, Chennai.
	2 <sup>nd</sup> Case writing competition	AIMA Delhi
	Online certificate program on Data Analysis using SPSS and AMOS	ASBM University
	Attended an online workshop on "Qualitative Research"	Virtual Center for Academic Research and Excellence Pvt. Ltd
Mr. Chandan	Module1-8 of "Teacher Training Program"	NITTTR, Chennai
Mr. Mohit	Module1-8 of "Teacher Training Program"	NITTTR, Chennai
Beniwal	NBA Accreditation Procedures	IQAC DTU and NTTTR Chennai
Dr. Shikha Khera	Two-weeks Industrial Training at Bajaj Motors Ltd, Gurgaon	Ramanujan College, University of Delhi

# 4.9 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



**Prof. N. S. Raghava** HoD

#### **ACADEMIC PROGRAMMES**



#### **LABORATORIES**

The Department has 17 Labs: Telecommunication Lab, Microwave & Optical Communication Lab, Robotics & Machine Learning Lab, Digital Electronics Lab, VLSI CAD Lab, Microprocessor Lab, Linear Integrated Circuit Lab, Electronics Device & Circuit Lab- I, Electronics Device & Circuit Lab- II, Circuit Fabrication Lab, Microwave CAD Lab, Freescale DTU Lab, Computer Vision Lab, Areal Robotics Lab and Unmanned Aerial Vehicles Fabrication Laboratory, Industrial sponsored (DRDO) Design Lab and many more.

#### **ACHIEVEMENTS**

Journal Publications 83

Conference Publications
 97

#### **SALIENT FEATURES**

The department of Electronics and Communication Engineering has seen considerable growth since its inception in 1976. The department's vision is to focus on incubating innovations in electronic design/ fabrication and communication technologies, which are needed to address the growing challenges of tomorrow. The aim is to harbor a sustainable, continuously evolving scientific, technological, and educational environment that is both internationally adapted and industry relevant. The department offers UG/PG and Ph. D. programs.

Currently, the department has an annual intake of 242 students in the B.Tech. program in Electronics and Communication Engineering and 90 students in M.Tech. programs (VLSI Design and Embedded Systems, Signal Processing and Digital Design, and Microwave & Optical Communication Engineering). The department also offers B.Tech. (Evening) with an intake of 60 students. Project and Industrial Training is an integral part of the curriculum and is carried out in frontal technology areas. Currently, the department has 11 well-equipped curriculum laboratories and 4 research laboratories. There are separate departmental project laboratories with new equipment and experiments

#### SALIENT FEATURES

work leading to a perfect understanding of electronics and communication engineering. The curriculum emphasizes a deep understanding of fundamental principles and the state-of-the-art knowledge. The PG programs emphasize a profound understanding of fundamental principles and state-of-the-art knowledge. The PG programs include M.Tech. in VLSI Design and Embedded Systems; Signal Processing & Digital Design, and Microwave and Optical Communication. The department has focused attention on quality research. Scholarships are available for Ph. D. programs in Electronics and Communication, namely VLSI, Embedded Systems, DSP, Image Processing, Microstrip antenna design, RF & Microwave Engineering, Sensor Networks, ML, DL & AI, Computer Vision, Robotics, Wireless Communication, Optical Communication, Nanoelectronics and Analog & Digital System Design.

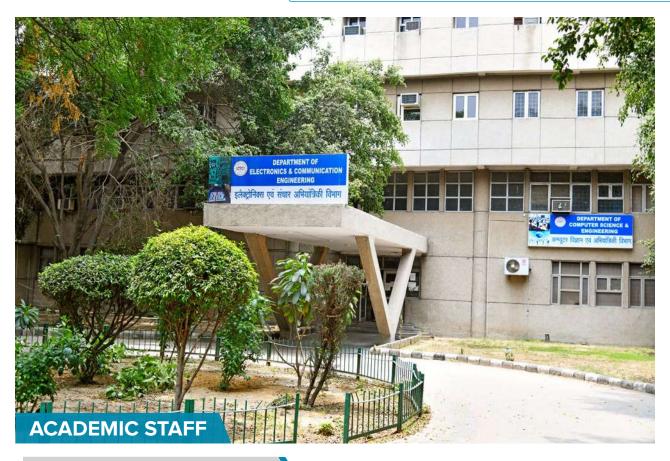
Faculty members of the department have been regularly contributing to International and National Journals of repute from publishers like IEEE Transactions, IET, Wiley, Springer, Elsevier, etc., along with the Proceedings of National and International Conferences. The department is also actively involved in professional activities undertaken by IEEE Delhi section. Several popular technical books and book-chapters have been authored by the faculty members of the department. Some faculty members have also applied for patents for the research findings.

The department of Electronics and Communication Engineering at Delhi Technological University has developed into one of the best departments of the University. The placement trend has shown that the department's students have successfully gotten lucrative jobs based on their interests in different fields. Top global recruiters such as Apple, Microsoft, NXP Semiconductors, Texas Instruments, Intel, NVIDEA, Google (Hardware), Ansys, Synopsis, SanDisk, Qualcomm, ARM, Analog Devices, AMD, Western Digital, ST Microelectronics, TCS digital India, Samsung, Wipro, Mentor Graphics, Airtel, CDOT, TCIL, and Ciena, Airtel, Oracle, Sprinklr, GE, etc. are some of the major recruiters for ECE Students. The average package offered to the B.Tech. and M.Tech. students of the department is about 16 Lacs and 22 Lacs per annum, while the maximum CTC for B.Tech. and M.Tech. students of 64 Lacs and 35.9 Lacs, respectively. Other recruiters from allied sectors have also recruited students from this department with attractive packages.

This consistent placement record illustrates the commitment and contribution of this department to the success story of the University. The graduates of the department are occupying important positions in both government as well as the corporate sector, with many of them having combined programs of higher studies in India and abroad.

The department regularly organizes seminars, workshops, and training programs in online and offline modes to keep pace with the new developments and recent trends in relevant technologies. The department recently organized a 3 Week Summer School Program (SSP) on "Machine Learning for Wireless Networks and Computer Vision" in July, 2022. The department also conducted various FDPs and STTPs to improve the quality of the faculties/teachers and staff by training and to enable the faculty members of various institutions/universities to be abreast with contemporary research methods, teaching techniques, pedagogical advancements, bridge the gap between industry and academia and focused discussions on contemporary advancements in the technical disciplines.

Apart from these activities, the students are encouraged to organize and participate in various technical and social activities under the aegis of the IEEE student branch and Robotics society. Technical fests are organized under the IEEE student branch and Robotics society. They are also encouraged to participate in various group learning & discussion activities and present seminars & term paper presentations.



#### **Professors: 15**

- Prof. N. S. Raghava (HoD), Ph.D., Area of Interest: Microwave Engineering.
- **Prof. O. P. Verma,** Ph.D., Areas of Interest: Image Processing, Signal Processing, Soft Computing and Artificial Intelligence.
- **Prof. Asok De,** Ph.D., Areas of Interest: Communication & Microwave.
- Prof. Rajiv Kapoor, Ph.D., Areas of Interest: Machine Learning Signal Processing and Pattern Recognition Cognitive Radio.
- Prof. S. Indu, Ph.D., Areas of Interest: Sensor Networks, Image Processings & Computer Vision.
- Prof. Rajeshwari Pandey, Ph.D., Areas of Interest: Microelectronics, Analog Circuits and Devices, and Analog IC Design.

- Prof. Neeta Pandey, Ph.D., Areas of Interest: Analog & Digital VLSI Design, Current mode ADC Design.
- Prof. Dinesh Kumar, Ph.D., Areas of Interest: Image Processing, Soft Computing, Biometrics, Medical Imaging, and Image Captioning.
- Prof. Jeebananda Panda, Ph.D., Areas of Interest: Image Processing, Watermarking and Cryptography, Embedded system Design, Data Compression, Object Detection and Tracking.
- Prof. Rajesh Rohilla, Ph.D., Areas of Interest: Computer Vision, Machine Learning, Embedded Systems, Robotics, and Digital Design.
- Prof. M. S. Choudhary, Ph.D., Areas of Interest: Signal Processing, Image Processing, Bio-Medical Signal & Image Processing.

- **Prof. Gurjit Kaur,** Ph.D., Areas of Interest: Optical Communication systems, Free Space Optical Communication, Optoelectronics Devices, Internet of Things, Green Technologies, and Wireless Communication.
- Prof. Poornima Mittal, Ph.D., Areas of Interest: Low power VLSI, SRAM Memory Cell and Flexible Electronics.
- Prof. Priyanka Jain, Ph.D., Areas of Interest: RF Microwave and Digital Signal Processing.
- Prof. Alok Kumar Singh, Ph.D., Areas of Interest: Analog Integrated Circuits and Signal Processing.

#### **Associate Professors: 1**

• Dr. Rajesh Birok, Ph.D., Areas of Interest: Communication Systems and Biomedical Electronics.

#### **Assistant Professors: 31**

- **Dr. Deva Nand,** Ph.D., Areas of Interest: Analog and Digital VLSI Design.
- · Dr. Avinash Ratre, Ph.D., Areas of Interest: Computer Vision, Machine Learning, Signal Processing, and Digital Communication.
- Dr. Ajai Kumar Gautam, Ph.D., Areas of Interest: Image Processing, Digital System Design, and Embedded system Design.
- Dr. N. Jayanthi, Ph.D., Areas of Interest: Image processing, Computer Vision and Communication systems.
- Dr. Sudipta Majumdar, Ph.D., Areas of Interest: Signal Processing, Nonlinear analysis, and Estimation theory.

- Dr. Malti Bansal, Ph.D., Areas of Interest: RF Electronics, IoT, Machine Learning, Nanoelectronics, and VLSI.
- Dr. Yashna Sharma, Ph.D., Areas of Interest: Optical Communication, Nanophotonics, and Plasmonics.
- Mr. Piyush Tewari, Ph.D. (Pursuing), Areas of Interest: Machine Learning, Deep Learning, Al, Signal Processing, and Wireless Communication.
- Mr. Anurag Chauhan, Ph.D. (Pursuing), Areas of Interest: Low power VLSI and Computational Nanoelectronics.
- Ms. Kriti Suneja, Ph.D. (Pursuing), Areas of Interest: VLSI Design, Testing of Digital Circuits, Non-Linear Dynamic Systems.
- Mr. Sumit Kumar Khandelwal, Ph.D. (Pursuing), Areas of Interest: Microwave Engineering, Advanced Semiconductor Devices.
- Dr. Pankaj Dahiya, Ph.D. (Submitted), Areas of Interest: Instrumentation and Control.
- Dr. Rohit Kumar, Ph.D., Areas of Interest: Communication Systems and Reinforcement Learning.
- Mr. Sachin Dhariwal, Ph.D. (Pursuing), Areas of Interest: Advanced Semiconductor Electronics.
- Mr. Akshay Mann, Ph.D. (Pursuing), Areas of Interest: Microelectronics, VLSI Design, and Mixed Signal Design.
- Mr. Lokesh Gautam, Ph.D. (Pursuing), Areas of Interest: Low Power VLSI Design.
- Mr. Rahul Thakur, Ph.D. (Pursuing), Areas of Interest: Computer Vision, Digital Image Processing, Machine Learning, Deep Learning, and Image Forensics.
- Mr. Kaustubh Ranjan Singh, Ph.D. (Pursuing), Areas of Interest: Wireless Communications. and Information Theory.

- Dr. Sachin Taran, Ph.D., Areas of Interest: Signal Processing.
- Dr. Sumit Kale, Ph.D., Areas of Interest: Microelectronics and VLSI Design.
- Dr. Sonal Singh, Ph.D., Areas of Interest: Nanotechnology and VLSI.
- Dr. Anukul Pandey, Ph.D., Areas of Interest: Signal Processing.
- Ms. Lavi Tanwar, Ph.D., (Pursuing) Areas of Interest: Signal Processing, Image Processing, and Digital Watermarking.
- Dr. Chhavi Dhiman, Ph.D., Areas of Interest: Computer Vision, Machine Learning, Artificial Intelligence, Deep Learning, Video Analysis and Pattern Recognition.
- Dr. Sonam Rewari, Ph.D., Areas of Interest: Semiconductor Device Modeling and VLSI Design.
- Dr. Manjeet Kumar, Ph.D., Areas of Interest: Signal Processing, Signal Biomedical Processing, Intelligence, Artificial Machine Learning, Fractional system design, and Image Processing.
- Dr. Deepika Sipal, Ph.D., Areas of Interest: RF and Microwave Engineering.
- Mr. M. Ganesh, Ph.D. (Pursuing), Asst. Professor, Areas of Interest: RF Circuits, Systems and Antennas.
- Dr. Harikesh, Ph.D., Areas of RF Interest: and Microwave Engineering.
- Mr. Varun Sanawan. Ph.D. (Pursuing), Areas of Interest: Image Processing and Computer Vision.
- Mr. Vinay Kumar, Areas of Interest: Microelectronics, Neuromorphic Engineering.







### **Achievements of the Department**

Department of ECE got NBA Accreditation for 3 years (A.Y. 2022-25) for its UG-Electronics & Communication Engineering program.

Department has received an (A+) Score in External Academic Audit.

ECE faculties has filed 7 patents.

Department of ECE got excellent placements in B.Tech. (UG) with Maximum CTC: ₹ 64.23 Lacs; Avg CTC ₹ 15.73 Lacs; Students Placed: 148; Total Offers: 179.

Department got excellent placements in M.Tech. (PG) with Maximum CTC: ₹ 35.9 Lacs; Avg CTC ₹ 21.65 Lacs; Students Placed: 29; Total Offers: 36

ECE Faculties have received 6 Research Excellence Award/ Commendable Research / Premiere Research Award.

### Patents Filed/Published/Awarded during the Current Year

Prof. Neeta Pandey, Prof. S. Indu and Ms. Ishu Tomar, filed a patent; "Real-Time Monitoring and Train Control System for Metro Railways" on 17<sup>th</sup> September, 2021.

Ms. Ishu Tomar, Prof. Neeta Pandey and Prof. S. Indu filed a patent; "PLC based System for Emergency Vehicle Management and Intelligent Traffic Control at Road Intersections" on 15<sup>th</sup> October, 2021.

Mr. Pankaj, Ashish Kumar, Rama Komaragiri, and Manjeet Kumar filed a patent; "An Automated System and Method for Monitoring Health Condition of a User" on 5<sup>th</sup> April, 2022. Garima Singh and Prof. Gurjit Kaur, filed a patent; "A Multicore Fiber Cable and Its Manufacturing Process Thereof".

Ms. Akanksha Srivastava and Prof. Gurjit Kaur, filed a patent; "Opportunistic Bandwidth Access using Unlicensed Spectrum as a Backup Resource (OBUB)". Ms. Anubha Goel,
Dr. Sonam Rewari,
Ms. Seema Verma and
Prof. R. S. Gupta filed a
patent; "Nanotube FET
Biosensor System and
Method for Detection of DNA
and Biomolecules Using the
Same" on 26<sup>th</sup> June, 2019.

Ms. Bhawna Rawat and Prof.
Poornima Mittal published
a patent; "Reconfigurable
Static Random-Access
Memory and Method
Thereof," on 28<sup>th</sup> January,
2022.

# Teachers Provided with Financial Support to attend Conferences/ Seminars/Symposia/Workshops/ Short Term Courses/Guest Lectures/ **GIAN/TEQIP** etc.

Dr. N. Jayanthi received ₹ 5100/- for attending industrial training program "Webinar on Public Procurement through GeM Portal" organized by NPC during 26th - 27th May, 2022.

Mr. M. Ganesh received ₹ 4555/- for attending the conference "IEEE CONECCT-2022" organized by IEEE Bangalore Section on 18th July, 2022.

Ms. Kriti Suneja received ₹ 8700/- for attending the conference "IEEE International Conference for Advancement in Technology (ICONAT)" on 7<sup>th</sup> January, 2022.

Ms. Kriti Suneja received ₹ 6500/- for attending the conference "International Mobile and Embedded Technology Conference (MECON)" on 27th May, 2022.

# Details of Teachers Attending PDPs, Orientation Programmes, Refresher Courses, Short Term Courses, FDPs during the Current Year.

- Prof. S. Indu attended the professional development program on "Healthcare Robotics and Drone Applications", organized by IIT Mandi during 27th - 29th May, 2022.
- Dr. Sumit Kale attended the "NBA" Accreditation Procedure", organized by DTU, Delhi during 9th - 11th May, 2022.
- Dr. Sumit Kale attended "Machine Learning **Applications** in Signal Processing and Wireless Networks", organized by DTU, Delhi during 20th -24th December, 2021.
- Dr. Sumit Kale Attended a "two-days training program for the newly recruited Assistant Professors of DTU", organized by DTU, Delhi during 12th - 16th July, 2022.

- Dr. N. Jayanthi attended a three-weeks summer school program on "Machine Learning for Wireless **Networks** and computer vision with Hands-on Experience", organized by ECE, DTU, Delhi during 11th - 29th July, 2022.
- Dr. N. Jayanthi attended an International Online Webinar on "Artificial Intelligence for Engineering Applications", organized by the National Institute of Technical Teachers-training and Research, Chennai, on 5th July, 2022.
- Dr. N. Jayanthi attended a one-week online Short Term Training Program on "Recent Advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.

- Dr. N. Jayanthi attended a faculty development program AICTE-ISTE sponsored one-week Induction/ Refresher Faculty Development Programme on "Active Learning Based Visual Computing", organized by ECE, DTU, Delhi during 9th - 15th February, 2022.
- · Prof. Dinesh Kumar attended an FDP on "NBA Accreditation Procedure", organized by DTU, Delhi, during 6th - 8th June, 2022.
- · Dr. Ajai Kumar Gautam attended oneweek FDP on "Research Methodology" and Introduction to Modellina Techniques", organized by DTU, Delhi, during 18th - 23rd July, 2022.
- Mr. Sumit Kumar Khandelwal attended a one-week online international FDP "Computational Techniques for Electromagnetics", organized by ECE, DTU, Delhi, in collaboration with Xiangshan Laboratory (XSL), during 27th - 31st December, 2021.
- Dr. Avinash Ratre attended oneweek of online International FDP "Computational Techniques for Electromagnetics", organized ECE, DTU, Delhi, in collaboration with Xiangshan Laboratory (XSL), Zhongshan Institute of CUST, China, and ARK Infosolutions Pvt Ltd, Delhi, India during 27<sup>th</sup> - 31<sup>st</sup> December, 2021.
- Dr. Avinash Ratre attended one-week online FDP on "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Dr. Sonal Singh attended "NBA Accreditation Procedure", organized by DTU, Delhi, India, during 9th - 11th May, 2022.

- Ms. Lavi Tanwar attended one-day E-workshop on "Entrepreneurial Ecosystem and start-up", organized by ECE, DTU, Delhi on 30th September, 2021.
- Ms. Lavi Tanwar attended two-days Workshop on "IEEE IoT Workshop: The future of Connectivity", organized by ECE, DTU, Delhi in collaboration with IEEE Delhi Section, IEEE Delhi CS Chapter, IEEE Delhi ComSoc Chapter and IEEE SA during 28th - 29th October, 2021.
- Ms. Lavi Tanwar attended a two-days offline training program for the newly recruited Assistant Professors of Delhi Technological University, organized by HRDC, DTU, Delhi, during 29<sup>th</sup> - 30<sup>th</sup> November, 2021.
- Ms. Lavi Tanwar attended a one-week online Short-Term Training Program on "Recent Advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Ms. Lavi Tanwar attended one-week Online Faculty Development Program on the theme of "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Ms. Lavi Tanwar attended one-week Online Elementary FDP on "Wireless Sensor Networks and IoT", organized by ECE, DTU, Delhi, and AICTE ATAL Academy during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.
- Mr. Rahul Thakur attended a two-days offline training program for the newly recruited Assistant Professors of Delhi Technological University, organized by HRDC, DTU, Delhi, during 29th - 30th November, 2021.

- Mr. Rahul Thakur attended one-week Online Faculty Development Program on the theme of "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Mr. Rahul Thakur attended one-week online Short-Term Training Program on "Recent Advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Mr. Rahul Thakur attended fivedays information literacy workshop-"E-Resources: A Gateway for Research, 5<sup>th</sup> edition (2021)", organized by DTU, Delhi during 6<sup>th</sup> - 10<sup>th</sup> September, 2021.
- Mr. Rahul Thakur attended Webinar on "Business Model Canvas (BMC)", organized by ECE, DTU, Delhi, on 27<sup>th</sup> April, 2022.
- Mr. Rahul Thakur attended three-weeks Summer School Program on "Machine Learning for Wireless Networks and Computer Vision with Hands-on-Experience", organized by ECE, DTU, Delhi, during 11<sup>th</sup> - 29<sup>th</sup> July, 2022.
- Mr. Vinay Kumar attended, one-week online 'Short Term Training Program' on "Recent Advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Mr. Vinay Kumar attended a twodays training program for the newly recruited Assistant Professors of Delhi Technological University, organized by, DTU, Delhi, India, during 29<sup>th</sup> - 30<sup>th</sup> November, 2021.
- Dr. Sudipta Majumdar attended twoweeks FDP on "IOT and Applications (Smart Systems)", organized by Electronics & ICT Academy Supported by

- the Ministry of Electronics and Information Technology (MeitY), Govt. of India, Indian Institute of Technology Guwahati during 14<sup>th</sup> 25<sup>th</sup> February, 2022.
- Mr. Sachin Dhariwal attended a two-days offline training program for the newly recruited Assistant Professors of Delhi Technological University, organized by HRDC, DTU, Delhi during 29<sup>th</sup> - 30<sup>th</sup> November, 2021.
- Mr. Sachin Dhariwal attended a Webinar on "Solar cell and OLED modeling and simulation using SETFOS Software", organized by ECE, DTU on 15<sup>th</sup> March, 2022.
- Dr Deepika Sipal attended one-week Online STTP on "Recent Advances and Challenges in Computer Vision (RACCV-21)", organized by DTU, Delhi, during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Dr. Deepika Sipal attended the one-week Online AICTE-ISTE Induction/Orientation Program on "Recent Advancements in ML & AI", organized by the department of Information Technology & department of Electronics & Communication Engineering of Bharati Vidyapeeth's College of Engineering, New Delhi, during 16<sup>th</sup> - 22<sup>nd</sup> December, 2021.
- Dr. Manjeet Kumar attended One Week Online Short-Term Training Program (STTP) on "Recent Advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi, during December, 3<sup>rd</sup> - 7<sup>th</sup>, 2021.
- Dr. Manjeet Kumar attended one-week Program on "Computational Techniques for Electromagnetics", organized by ECE, DTU, Delhi, during 27<sup>th</sup> - 31<sup>st</sup> December, 2021.
- Dr. Manjeet Kumar attended the AICTE Sponsored one-week online Faculty Development Program (FDP) on "Wireless Sensor Networks and IoT",

- organized by ECE, DTU, Delhi, during 10<sup>th</sup> - 14<sup>th</sup>, January, 2022.
- Dr. Manjeet Kumar attended one-week Online Faculty Development Program (FDP) on "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi, during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Dr. Manjeet Kumar attended three-weeks Summer School Program on "Machine Learning for Wireless Networks and Computer Vision with Hands-on-Experience", organized by ECE, DTU, Delhi during 11<sup>th</sup> - 29<sup>th</sup> July, 2022.
- Dr. Manjeet Kumar attended a two-days workshop on "IEEE IOT Workshop: The Future of Connectivity", organized by IEEE Standard Association, IEEE Delhi Section, IEEE Delhi CS Chapter, IEEE Delhi ComSoc Chapter, and ECE, DTU, Delhi, during 28<sup>th</sup> - 29<sup>th</sup> October, 2021.
- Dr. Manjeet Kumar attended three-days online Faculty Training Program on "5G Wireless Communication Technology", organized by IEEE India Council during 28th - 30th July, 2022.
- Dr. Manjeet Kumar attended a two-days offline training program for the newly recruited Assistant Professors of Delhi Technological University, organized by HRDC, DTU, Delhi, during 29th - 30th November, 2021.
- Dr. Manjeet Kumar attended Online Webinar on "Webinar on 6G for a Hyperconnected Future", organized by Bharti Vidyapeeth Institute of Computer Applications and Management (BVICAM), New Delhi, India, on 11th September, 2021.
- · Dr. Manjeet Kumar attended oneday E-Workshop on the theme of "Entrepreneurial Ecosystem and start-

- up", organized by the ECE, DTU, Delhi, India on 30<sup>th</sup> September, 2021.
- Dr. Manjeet Kumar attended Online Webinar on "Scientific writing for Good Research Quality journal Papers", organized by the Teaching Learning Centre and School of Engineering and Technology, Sharda University, Greater Noida on 6<sup>th</sup> September, 2021.
- Dr. Manjeet Kumar attended Webinar on "Business Model Canvas", organized by ECE, DTU, Delhi, on 27th April, 2022.
- Dr. Sonam Rewari attended AICTE Sponsored one-week Online Faculty Development Program (FDP) "Wireless Sensor Networks and IoT", organized by ECE, DTU, Delhi during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.
- Mr. Pankaj Dahiya attended "Machine Learning for Wireless Networks and Vision with Hands-on-Computer Experience", organized by ECE, DTU, Delhi, during 11th - 29th July, 2022.
- Mr. Pankaj Dahiya attended GIAN Course on "Precision Positioning Systems: Dynamics and Control". department organized by the Electrical Engineering, National Institute of Technology, Kurukshetra, during 31st January - 4th February, 2022.
- Mr. Pankaj Dahiya attended AICTE Sponsored one-week Short Term Training Program on "Cloud Computing and Internet of Things", organized by the department of Electronics Engineering, J. C. Bose University of Science and Technology, YMCA, Faridabad during 7<sup>th</sup> - 12<sup>th</sup> February, 2022.
- Dr. Sachin Taran attended "Machine Learning **Applications** Signal Processing and Wireless Networks", organized by DTU, Delhi, during 20th -24th December, 2021.

- Dr. Sachin Taran attended "Wireless Sensor Networks and IoT", organized by ECE, DTU, Delhi during 10<sup>th</sup>-14<sup>th</sup> January, 2022.
- Dr. Sachin Taran attended "Internet of Things (IOT): the Future of Connectivity", organized by Jointly, organized by IEEE Standards Association, ECE, DTU, IEEE Delhi Section, IEEE Delhi CS Chapter, and IEEE Delhi ComSoc Chapter during 28<sup>th</sup> -29<sup>th</sup> October, 2021.
- Dr. Anukul Pandey attended "Machine Learning Applications in Signal Processing and Wireless Networks", organized by DTU, Delhi, during 20<sup>th</sup> -24<sup>th</sup>, December, 2021.
- Dr. Anukul Pandey attended "Wireless Sensor Networks and IoT", organized by ECE, organized by DTU, Delhi during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.
- Dr. Anukul Pandey attended "Internet of Things (10T): the Future of Connectivity", Jointly, organized by IEEE Standards Association, ECE, DTU, IEEE Delhi Section, IEEE Delhi CS Chapter, and IEEE Delhi ComSoc Chapter during 28<sup>th</sup> - 29<sup>th</sup> October, 2021.
- Dr. Anukul Pandey attended "Research Methodology and Introduction to Modelling Techniques", organized by one-week Faculty Development Program at DTU, Delhi, during 18<sup>th</sup> - 23<sup>rd</sup> July, 2022.
- Dr. Deva Nand attended the "Memory Design Workshop", organized by IEEE Circuits and Systems (CAS) Society Bangalore chapter in association with IEEE Bangalore Section during 9<sup>th</sup> - 13<sup>th</sup> August, 2021.
- Dr. Deva Nand attended "Nascent Methodologies, challenges and Realms of Research", organized by ECE, DTU during 3<sup>rd</sup> - 7<sup>th</sup> October, 2021.

- Dr. Deva Nand attended "National Education Day", organized by HRDC in association with IIC-DTU & IIF-DTU, DTU, Delhi on 11<sup>th</sup> November, 2021.
- Dr. Deva Nand attended "Recent advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi during 3<sup>rd</sup> - 7<sup>th</sup> October, 2021.
- Dr. Deva Nand attended "Machine learning applications in signal processing and wireless networks", organized by ECE, DTU, Delhi during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Dr. Deva Nand attended "Wireless Sensor Networks and IoT", organized by AICTE (ATAL) during 10<sup>th</sup> -14<sup>th</sup> January, 2022.
- Dr. Deva Nand attended "Business Model Canvas", organized by ECE, DTU, Delhi on 27<sup>th</sup> April, 2022.
- Mr. M. Ganesh attended "Recent Innovation and Development in RF and Microwave Engineering for Wireless Communication", organized by NIT Hamirpur, HP India, during 12<sup>th</sup> - 16<sup>th</sup> May, 2022.
- Mr. M. Ganesh attended "5G Antenna Design with AIML Applications using HFSS", organized by St. Martin's Engineering College during 27<sup>th</sup> - 28<sup>th</sup> May, 2022.
- Mr. M. Ganesh attended "NBA accreditation Procedures" by NITTTR Chennai during 9<sup>th</sup> - 11<sup>th</sup> May, 2022.
- Mr. M. Ganesh attended "Advanced Optimization Techniques and handson with MATLAB/SCILAB", organized by Electronics & ICT Academies of MNIT Jaipur, NIT Patna, IIITDM Jabalpur & IIT Guwahati during 6<sup>th</sup> - 17<sup>th</sup> September, 2021.
- Ms. Kriti Suneja attended one-week online faculty development program on the theme of "machine learning applications in signal processing and

- wireless networks", organized by ECE, DTU, Delhi, during 20th - 24th December, 2021.
- Ms. Kriti Suneja attended Internship Program on "Functional Verification using System Verilog", organized by Sandeepani School of Embedded System Design, Bangalore, during 30<sup>th</sup> November - 29th December, 2021.
- Ms. Kriti Suneja attended AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Wireless Sensor Networks and IoT", organized by DTU, Delhi during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.
- Ms. Kriti Suneja attended a two-days workshop on "Design Thinking, Critical Thinking and Innovation Design", the organized by department of Software Engineering, DTU, Delhi during 13th - 14th January, 2022.
- Mr. Akshay Mann attended three-days Faculty Development Workshop on "Embedded Systems and IoT", organized by ST Microelectronics on 11th, 20th and 22<sup>nd</sup> April, 2022.
- Mr. Akshay Mann attended two-weeks Online Joint Faculty Development Programme on "IoT & Applications (smart Systems)", organized by Electronics & ICT Academies, MietY, Government of India during 14<sup>th</sup> - 25<sup>th</sup> February, 2022.
- Mr. Akshav Mann attended oneweek online Workshop on "Recent Development in the Field of Electronics", organized by the department of Electronics, University of Delhi, South Campus, New Delhi during 25th - 29th July, 2022.
- Mr. Akshay Mann attended three-weeks Summer School Program on "Machine Learning for Wireless Networks & Computer Vision with Hands-on Experience", organized by ECE, DTU, Delhi during 11<sup>th</sup> - 29<sup>th</sup> July, 2022.

- Mr. Akshay Mann attended the "NBA Accreditation Procedure", organized by DTU, Delhi, during 25<sup>th</sup> - 27<sup>th</sup> February, 2022.
- Mr. Akshay Mann attended a two-days soffline training program for the newly recruited Assistant Professors of Delhi Technological University, organized by HRDC, DTU, Delhi during 29th - 30th November, 2021.
- Mr. Anurag Chauhan attended oneday E-Workshop on the theme of "Entrepreneurial Ecosystem and startup", organized by ECE, DTU, Delhi, on 30<sup>th</sup> September, 2021.
- · Mr. Anurag Chauhan attended twodays IEEE Workshop on "Internet of Things (IOT): the Future of Connectivity", organized by **IEEE** Standards Association, ECE, DTU, IEEE Delhi Section, IEEE Delhi CS Chapter, and IEEE Delhi ComSos Chapter during 28th - 29th October, 202.
- Mr. Anurag Chauhan attended a oneonline Short-Term Training Program on "Recent Advances and Computer Challenges in Vision". organized by ECE, DTU, Delhi, India. during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Mr. Anurag Chauhan attended one-week Online Faculty Development Program on the theme of "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi, India, during 20th - 24th December, 2021.
- Anuraq Chauhan Mr. attended online one-week international Faculty Development Program on "Computational Techniques for Electromagnetics", organized by ECE, DTU, India in collaboration with Xiangshan Laboratory (XSL), Zhongshan

- Institute of CUST, China and ARK Infosolutions Pvt. Ltd. India during 27<sup>th</sup> 31<sup>th</sup> December. 2021.
- Mr. Anurag Chauhan attended online Elementary FDP on "Wireless Sensor Networks and IoT", organized by AICTE Training and Learning (ATAL) Academy during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.
- Mr. Anurag Chauhan attended three-days sFDP on "NBA Accreditation Procedures", organized by NITTR, Chennai, during 9<sup>th</sup> - 11<sup>th</sup> May, 2022.
- Dr. Gurjit Kaur attended "Research trends in the field of communication", organized by DTU, Delhi, during 10<sup>th</sup> -14<sup>th</sup> January,. 2022.
- Dr. Gurjit Kaur attended "Internet of Things (IoT): The Future of Connectivity", organized by DTU, Delhi, during 28<sup>th</sup> -29<sup>th</sup> October, 2021.
- Dr. Chhavi Dhiman attended "Electric Vehicle Technologies and Proposal Writing for Government Fundings in Emerging Areas,", organized by one-day workshop at DTU, Delhi, on 31st May, 2022.
- Mr. Piyush Tewari attended one-week Online Elementary FDP on "Wireless Sensor Networks and IoT", organized by ECE, DTU, Delhi, and AICTE ATAL Academy during 10<sup>th</sup> - 14<sup>th</sup> January, 2022
- Mr. Piyush Tewari attended the oneday Workshop on "Electric Vehicle Technologies and Proposal Writing for Government Fundings in Emerging Areas", organized by the department of Electrical Engineering, DTU, Delhi on 31st May, 2022.
- Mr. Piyush Tewari attended the oneday Workshop on "Electric Vehicle Infrastructure: Technologies and Opportunities", organized by the Centre of Excellence for Electric Vehicles and

- Related Technologies at DTU, Delhi, on 2<sup>nd</sup> June, 2022.
- Mr. Piyush Tewari attended one-week Online Faculty Development Program on the theme of "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi, during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Mr. Piyush Tewari attended the Orientation/Refresher Program on "Recent Advancement in ML & AI", organized by one-week Orientation/ Refresher Program, organized by Bharati Vidyapeeth's College of Engineering, New Delhi, during 16<sup>th</sup> - 20<sup>th</sup> December, 2021.
- Mr. Piyush Tewari attended a one-week online Short-Term Training Program on "Recent Advances and Challenges in Computer Vision", organized by oneweek online short-term training program by ECE, DTU, Delhi, during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Mr. Piyush Tewari attended two-days Workshop on "Internet of Things (IoT): The Future of Connectivity", organized by Jointly, organized by IEEE Standards Association, ECE, DTU, IEEE Delhi Section, IEEE Delhi CS Chapter, and IEEE Delhi ComSoc Chapter during 28<sup>th</sup> - 29<sup>th</sup> October, 2021.
- Dr. Rajesh Birok attended "Computational Techniques for Electromagnetics", organized by ECE, DTU, Delhi during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Dr. Rajesh Birok attended an FDP "Machine Learning Applications in Signal Processing and Wireless Networks" jointly, organized by ECE, DTU, Delhi & CUST/XSL during 27<sup>th</sup> - 31<sup>st</sup> December, 2021.
- Dr. Rajesh Birok attended "Research Methodology and Introduction to

- Modelling Techniques", organized by DSM, DTU, Delhi during 18th - 23rd July, 2022.
- Mr. Kaustubh Ranjan Singh attended a two-days offline training program for the newly recruited Assistant Professors Technological University, of Delhi organized by HRDC, DTU, Delhi, during 29th - 30th November, 2021.
- Dr. Harikesh attended the Accreditation Procedure", organized by DTU, Delhi, during 6<sup>th</sup> - 8<sup>th</sup> June, 2022.
- Dr. Rohit Kumar attended the one-week Online Faculty Development Program (FDP) on "Machine Learning Applications in Signal Processing and Wireless Networks", organized by ECE, DTU, Delhi, during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.
- Dr. Rohit Kumar attended AICTE Sponsored one-week online Faculty Development Program (FDP) "Wireless Sensor Networks and IoT", organized by the department Electronics and Communication, DTU, Delhi, during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.
- · Dr. Rohit Kumar attended the threeweeks Summer School Program on "Machine Learning for Wireless Networks and Computer Vision with Hands-on-Experience", organized by ECE at DTU, Delhi during 11th - 29th July, 2022.
- Prof. Alok Kumar Singh attended a oneweek online Short-Term Training Program on "Recent Advances and Challenges in Computer Vision", organized by ECE, DTU, Delhi, during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Mr. Lokesh Gautam attended a two-days offline training program for the newly recruited Assistant Professors of Delhi Technological University, organized by HRDC, DTU, Delhi, during 29th - 30th November, 2021.

Mr. Lokesh Gautam attended a one-week online international Faculty development program on "Computational Techniques for Electromagnetics", organized by ECE, DTU, Delhi in collaboration with Xiangshan Laboratory (XSL) during 27th - 31st December, 2021.

# **Visit of Faculty to Other institutions** for Taking Expert Lectures/Other **Academic Work**

- Dr. N. Jayanthi delivered an expert lecture at Sethu Institute of Technology, Pullor. Kariapatti Virudhunagar District, Tamilnadu, on "Processing of Manuscripts and Inscription Images (webinar)" on 28th February, 2022.
- Prof. Dinesh Kumar attended the BOS Meetings at IGDTUW, Delhi.
- Prof. Dinesh Kumar attended the BOS Meetings at GGSIPU, Dwarka, Delhi.
- · Prof. Dinesh Kumar attended the BOS Meetings at DCRUST, Murthal, Haryana.
- · Prof. Dinesh Kumar participated as a Member of Governing Body ANDC, Kalkaji, Delhi.
- Prof. Dinesh Kumar participated as a Member of Governing Body MAC, Vasundhra Enclave, Delhi.
- Dinesh Kumar attended the BOS Meeting at Gurugram University, Gurugram.
- Prof. Dinesh Kumar participated as a Member of PG Bos at J. C. Bose University of Science and Technology, Faridabad, Haryana.
- Prof. Dinesh Kumar participated as an Outside Expert Member, Faculty of Engineering and Technology (FET) at GJUST, Hisar, Haryana.
- Mr. Sumit Kumar Khandelwal, was the Resource Person to teach the course Microwave Devices & Circuits, VI

- Semester, at JNU, School of Engineering, during 13<sup>th</sup> 18<sup>th</sup> May, 2022 (20 hours).
- Dr. Manjeet Kumar delivered an online Expert talk on "Optimization Techniques for Digital Filter design" in the One Week Online faculty development program on "Recent Trends in Signal Processing and Machine Learning with their Applications" at Geetanjali Institute of Technical Studies, Udaipur, Rajasthan, on 28th July, 2022.
- Dr. Sonam Rewari delivered an expert lecture in the one-week Colloquium on "Multidisciplinary Research Problems and Advancements" held during 7<sup>th</sup> -11<sup>th</sup> March, 2022 at the department of Computer Science & Engineering, Amity School of Engineering & Technology Amity University, Noida.
- Prof. S. Indu participated as an expert member of recruitment at the University of Delhi during 3<sup>rd</sup> - 4<sup>th</sup> March, 2022.
- Prof. S. Indu participated as Academic Council Member at NSUT, Delhi.
- Prof. S. Indu participated as the external examiner for M.Tech. Viva at IGDTUW, Delhi.
- Prof. S. Indu participated as the external examiner for Ph.D. Viva Voce at ABV-IIITM Gwalior.
- Prof. S. Indu participated as the external examiner for Ph.D. Viva Voce at Thapar Institute, Punjab.
- Prof. S. Indu participated as the external examiner for Ph.D. Viva Voce at IIEST Shibpur.
- Prof. S. Indu participated as the SRC member of the ECE department at SRM University, NCR campus.
- Prof. S. Indu participated as an expert in evaluating projects at AICTE.
- Prof. S. Indu participated as an expert in evaluating projects for TARA Scheme at SERB.

- Prof. S. Indu participated as the RAC member NSUT East Campus, Delhi.
- Prof. Rajeshwari Pandey participated as an External Expert in the Committee for the establishment of departments under the Faculty of Technology DU" at the University of Delhi," on 18<sup>th</sup> December, 2021, 30<sup>th</sup> December, 2021, 25<sup>th</sup> January, 2022, 5<sup>th</sup> April, 2022, 22<sup>nd</sup> July, 2022.
- Prof. Rajeshwari Pandey participated as the external examiner for the M.Tech Project Viva Voce Exam at JMI, Delhi, on 13<sup>th</sup> July, 2022.
- Prof. Rajeshwari Pandey participated in the Online DRC Meeting at JMI, Delhi, on 25<sup>th</sup> May, 2022.
- Prof. Rajeshwari Pandey participated as an external expert in the online SRC Meeting at the School of Electronics Engineering VIT, Amaravati, Andhra Pradesh, on 21st June, 2022.
- Prof. Poornima Mittal participated as the external BOS member at MMMUT, Gorakhpur, U.P. on 20<sup>th</sup> May, 2022.
- Prof. Poornima Mittal participated as the external examiner for Ph.D. Viva Voce at Lovely Professional University, Jalandhar, Punjab on 29<sup>th</sup> June, 2022.
- Prof. Poornima Mittal participated as the external examiner for Ph.D. Viva Voce at Petroleum University, Dehradun, Uttarakhand on 15<sup>th</sup> September, 2021.
- Prof. Poornima Mittal participated as the external examiner for Ph.D. Viva Voce at MMMUT, Gorakhpur, U.P. on 20<sup>th</sup> August, 2021.
- Prof. Poornima Mittal participated as the external examiner for Ph.D. Viva Voce at Uttarakhand Technical University, Dehradun, Uttarakhand on 16<sup>th</sup> December, 2021.
- Prof. Poornima Mittal participated as the external examiner for B.Tech. Project at MMMUT, Gorakhpur, U.P. on 2<sup>nd</sup> July, 2022.

- · Dr. Chhavi Dhiman delivered an online expert lecture on "Image Captioning with transformers" at Bharti Vidyapeeth (BVP) College of Engineering on 2<sup>nd</sup> May, 2022.
- Dr. Chhavi Dhiman delivered an expert lecture on "Image Captioning with transformers" in the one-week online STTP "Recent advances and challenges in Computer vision" at DTU held during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.
- Dr. Chhavi Dhiman delivered an expert lecture on "Artificial Intelligence and its Applications" in "STEM and High-end 21st-century skills schools for the launch of Schools of Specialized Excellence on 27th September, 2021.
- Dr. Sachin Taran delivered an expert lecture at DTU Delhi on "Adaptive signal processing for non-stationary signal analysis and classification" in an FDP held on 24th August, 2021.
- Dr. Harikesh delivered a one-hour online expert talk in the department of Electronics and Communication Engineering, DTU, India, in collaboration with Xiangshan Laboratory (XSL) in the FDP "Computational Techniques for Electromagnetics" held during 27th - 31st December, 2021.
- · Dr. Rohit Kumar delivered an Expert talk on "Reinforcement Learning for

- Cognitive Radio and IoT Networks" at DTU Delhi during 21st Decemebr 2021.
- Dr. Rohit Kumar delivered an Expert talk on "Reinforcement Learning in Wireless Networks" at an FDP at Infinity College, Madhya Pradesh during 4th January, 2022.
- Dr. Rohit Kumar delivered an Expert talk on "Reinforcement Learning in Wireless Networks" in ATAL-sponsored FDP at Delhi Technological University, Delhi, during 14th January, 2022.
- Rohit Kumar, visited Centrale Supelec, France as Visiting Professor, during 17th October - 17th December, 2022.
- Dr. Gurjit Kaur delivered an expert lecture on "Research trends in the field of optical communication" at Guru Jambheshwar University of Science & Technology, Hisar, Haryana, during 3<sup>rd</sup> - 8<sup>th</sup> January, 2022.
- Dr. Gurjit Kaur delivered an expert lecture in "Chandigarh College of Engineering and Technology" on "Research trends in the field of optical communication" during 4th - 8th October, 2021.
- Dr. Deepika Sipal delivered an online Expert talk on Computational Techniques for Electromagnetics at Organised by ECE, DTU, India, in collaboration with Xiangshan Laboratory (XSL) during 27th -31st December, 2022.

Teachers/Staff/Students who Received Awards, Recognition, and Fellowships at State, National, and International Level from Government, and Recognized Bodies during the Current Year



Grants for Research Projects Sponsored by Non-Government Sources such as Industry, Corporate Houses, International Bodies, Endowments, and Chairs in the Institution during the Current Year

Prof. Mini Sreejeth (PI) and Prof. S.Indu (CO PI) were funded (₹ 45 Lacs) by the government organization "MIETY" in the department of Electronics and Communication Engineering, year of award 2019 for Three years.

Prof. S. Indu (PI) and Dr. N. Jayanthi (CO PI) were funded (₹ 26 Lacs) by the government organization "DST" in the department of Electronics and Communication Engineering, year of award 2019 for 3 years.

Detail of PDPs/ Conferences / Seminars / Symposia/ Workshops / Short Term Course / Guest Lectures / GIAN / TEQIP / Administrative Training Programmes, organized by the Department for Teaching and Non-Teaching Staff during Current Year

Mr. Pankaj Dahiya (Coordinator) and Dr. Anukul Pandey (organizing committee member), organized the Professional Development program "Exploring Engineering," during 20th - 25th June, 2022 under the aegis of Centre for Extension and Field outreach, DTU, Delhi.

Prof. Gurjit Kaur, organized "Machine Learning Applications in Signal Processing and Wireless Networks" at ECE, DTU, during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.

Dr. Chhavi Dhiman participated as an organizing committee member for one-week online STTP on "Recent advances and challenges in Computer vision" at ECE, DTU during 3<sup>rd</sup> - 7<sup>th</sup> December, 2021.

Prof. S. Indu, Dr. Chhavi Dhiman, and Dr. Rohit Kumar participated as organizing committee members for three-weeks of online SSP on "Machine Learning for Wireless Networks and Computer vision" at ECE, DTU, during 11th - 29th July, 2022.

Dr. Rohit Kumar participated as an organizing committee member for One Week Online Faculty Development Program (FDP) on "Machine Learning Applications in Signal Processing and Wireless Networks" at ECE, DTU, during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.

Prof. S. Indu and Prof. Gurjit Kaur participated as organizing committee members for ATAL FDP "Wireless Sensor Networks and IoT" at ECE, DTU, during 10<sup>th</sup> - 14<sup>th</sup> January, 2022.

Prof. S. Indu and Prof. Gurjit Kaur participated as organizing committee members for two-days Workshop on "IEEE IoT Workshop: The future of Connectivity" at ECE, DTU, in collaboration with IEEE Delhi Section, IEEE Delhi CS Chapter, IEEE Delhi ComSoc Chapter and IEEE SA" DTU, Delhi during 28th - 29th October, 2021.

**Number of Functional MoUs with** Institutions of National, International Importance, Other Universities, Industries, Corporate Houses etc. during the Last Five **Years** 

Prof. N. S. Raghava, Prof. Rajeshwari Pandey, Prof. Neeta Pandey and Mr. Akshay Mann signed MoU between Indian Patent Office and Semiconductor Integrated Circuits Layout Design Registry and department for 1 year in 2022. Participants are attended it where the actual activity is done in Consultancy regarding confirmation of integrated circuits layout.

# Student's **Achievements**

Aryan, B.Tech. ECE, 3<sup>rd</sup> year (International & scholarship award) in Robotics institute summer scholars, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States of America.

# **Extension & Outreach Activities**

- Mr. Piyush Tewari worked as Faculty Coordinator for Community Engagement Course (MSS) through "Desh Ke Mentor Program" for Group A8 on Feburary-April, 2022. DTU, Delhi.
- · Dr. Chhavi Dhiman, Dr. Manjeet Kumar and Dr. Sachin Taran participated as Faculty Coordinators for Community
- Engagement Course (MSS) through "As Faculty Coordinator for Community Engagement Course (MSS) through "Desh Ke Mentor Program" during February-April, 2022. DTU, Delhi.
- Prof. Neeta Pandey contributed "Committee Member of Youth Education Program" (Desh Ke Mentor).

# 4.10 DEPARTMENT OF ELECTRICAL ENGINEERING



**Prof. Uma Nangia** HoD

# **ACADEMIC PROGRAMMES**

B.Tech. (EED)

Intake : **302** Admitted : **301** 

M.Tech. (Control & Instrumentation)

> Intake : 25+5 Admitted : 8

M.Tech. (Power System) Intake : 25+5 Admitted : 6 B.Tech. (EED, Continue Education)

Intake : **60** Admitted : **49** 

M.Tech.
(Power Electronics and Systems)
Intake: 30+5

Admitted : 16

Ph.D.: 44

# **LABORATORIES**

The department has 17 well-equipped laboratories which include Basic Electrical Engineering Lab, Electrical Workshop, Junior Machines Lab, Senior Machines Lab, I&M Lab, LIC Lab, Electrical Energy Utilization Lab, Power Electronics Lab, Drives Lab, Control System Lab, Microprocessor & Microcontroller Lab, Process Control Lab, Power System Lab, Switchgear & Protection Lab, PS Simulation Lab, High Voltage Lab, Simulation Lab.

#### **ACHIEVEMENTS** -

Journal Publications

50

Conference Publications

56

# **SALIENT FEATURES**

The department of Electrical Engineering of Delhi Technological University is one among the first major departments to be established in 1941.

The year 2020 marks the 79<sup>th</sup> year of Excellence (Platinum Jubilee) 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.

Faculty members of the department have been regularly contributing towards International and National Journals of repute like IEEE Transactions and 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 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 fests like TROIKA; RENAISSANCE organized under the IEEE student chapter and IET student chapter.

4. ACADEMIC DEPARTMENTS



# **Professors: 22**

- Prof. Uma Nangia (HoD), B.E., M.E., Ph.D, Area of Interest: Power Systems.
- **Prof. Narendra Kumar (I),** B.Sc (Engg.) M.Sc. (Engg.), Ph.D., Areas of Interest: Power Systems and Drives.
- **Prof. Madhusudan Singh,** B.Sc. (Engg.), M.E., (Hons), Ph.D., Areas of Interest: Control & Instrumentation.
- Prof. Narendra Kumar (II), B.E., M.E., Ph.D., Areas of Interest: Instrumentation and Control & Power Electronics Applications.
- **Prof. Pragati Kumar,** M.Tech., Ph.D., Areas of Interest: Control & Instrumentation.

- Prof. Vishal Verma, M.Tech., Ph.D., Area of Interest: Power Electronics.
- Prof. Suman Bhowmick, B.E. (Hons.) M.E., Ph.D., Areas of Interest: Power Systems, FACTS and VSC-HVDC.
- Prof. Rachna Garg, M.Tech., Ph.D., Areas of Interest: Power system operation and control, renewable energy systems artificial intelligent techniques smart grid.
- Prof. Bharat Bhushan, B.E., M.E., Ph.D, Areas of Interest: Control & Instrumentation.
- Prof. S. T. Nagarajan, B.E., M.E., Ph.D, of Interest: High Voltage Engineering and Power System.

- Prof. Alka Singh, B.E., M.Tech., Ph.D., Area of Interest: Power Systems.
- Prof. Mukhtiar Singh, B.Tech., M.Tech., Ph.D.. Areas of Interest: Power Electronics and Drives.
- Prof. Dheeraj Joshi, B.E., M.E., Ph.D., Areas of Interest: Power Electronics, Electric Drives and Renewable Energy Systems.
- Prof. M. M. Tripathi, B.Tech., M.Tech., Ph.D., Areas of Interest: Restructuring power systems, Artificial Intelligence (AI) application to load & price forecasting, Integration of renewable energy sources in electricity markets, Cyber Security of Smart Grid and Embedded Systems.
- Prof. J. N. Rai, M.Tech., Ph.D., Area of Interest: Power Systems.
- Prof. Priya Mahajan, M.E., Ph.D., Areas of Interest: Railway Electric Traction System, Power System and Electrical Machines.
- Prof. Sudarshan K Valluru, B.Tech., M.Tech., Ph.D., Areas of Interest: Artificial Intelligence, Bio-Inspired Algorithms, Control Dynamical systems, Bifurcation Analysis and Electrical Machines.
- Prof. Mini Sreejith, M.E., Ph.D., Areas of Interest: Electrical Machines.
- Prof. Ram Bhagat, B.Tech., M.E., Areas of Interest: Control & Instrumentation.
- Prof. M. Rizwan, B.Tech., M.Tech., Ph.D., Area of Interest: Power System.
- Prof. Vinod Kumar Yadav, B.Tech., M.Tech., Ph.D., Area of Interest: Power Systems.
- Prof. R. S. Saha, B.E., M.E., Ph.D, Areas of Interest: HVDC & Power System.

# **Honorary Professors: 2**

- Prof. N. K. Jain, B.Sc. (Engg.), M.Sc. (Engg), Ph.D., Area of Interest: Power Systems.
- Prof. D. R. Bhaskar, B.Tech., M.Tech., Ph.D., Areas of Interest: Bipolar and MOS Analog Integrated Circuits.

# **Associate Professors: 3**

- Sh. N. K. Bhagat, B.Sc (Engg.), M.Tech., Area of Interest: Control Systems.
- Sh. D. C. Meena, B.Tech., M.Tech., Area of Interest: Power System.
- Sh. R. L. Meena, B.E., M.Tech., Area of Interest: Power Quality.

# Assistant Professors: 25

- Mr. A. B. Bhattacharya, M.Tech., Area of Interest: Power System.
- Mr. Prem Prakash, B.E., M.Tech., Area of Interest: Engineering Systems.
- Dr. Bhavnesh Jaint, B.E., M.E., Area of Interest: Electrical Engineering.
- Sh. A. R. Kulkarni, B.E., M.E., Areas of Interest: Control System Intelligent Transportation Systems, Microcontrollers & Embedded Systems and Robotics.
- Dr. Garima, B.E., M.Tech., Areas of Interest: Analog and VLSI.
- Sh. Kuldeep Singh, B.Tech., M.Tech., Area of Interest: Power Systems.
- Dr. Ankita Arora, B.Tech., M.Tech., Areas of Interest: Renewable Energy Sources, Power Electronics, Electrical Machines, Artificial Intelligence Techniques and Control Systems.

- Sh. Saurabh Mishra, B.E., M.Tech., Area of Interest: Electrical Drives.
- Sh. Sikandar Ali Khan, B.Tech., M.Tech., Areas of Interest: Electrical Machines, Electrical Drives and Power System.
- Sh. Himanshu Singh, B.E., M.Tech., Areas of Interest: Power Electronics. Electrical Machines. Electrical Drives and Control System.
- Dr. Anup Kumar Mandpura, B.Tech., M.Tech., Ph.D., Areas of Interest: Cooperative Communication Systems.
- Dr. Rajesh Kumar, B.Tech., M.Tech., Ph.D., Areas of Interest: Control Systems and Instrumentation and Soft Computing.
- Dr. Mayank Kumar, B.Tech., M.Tech., Ph.D., Areas of Interest: PWM of Power Converters, Modeling and Control of Power Electronics Converters, and Solar Power Conversion.
- Dr. Prakash Chittora. B.Tech.. M.Tech.. Ph.D., Areas of Interest: Power System, Power Quality and Power Electronics.
- Mrs. Shatakshi, B.E., M.Tech., Areas of Interest: Renewable Energy Systems and Power systems.
- Mr. Rohan Pillai, B.Tech., M.Tech., Area of Interest: Microelectronics.
- Mr. Gaurav Kaushik, B.Tech., M.Tech., Areas of Interest: Power Electronics and Control systems.

- Mr. Shreyansh Upadhyaya, B.Tech., M.Tech.. Areas of Interest: Power Electronics, Control systems.
- Dr. Vanjari Venkata Ramana, B.Tech., M.Tech., Ph.D., Areas of Interest: Power Electronics.
- Mr. Abhishek Chaudhary, B.E., M.Tech., Area of Interest: Control System Engineering.
- Dr. Chaudhry Indra Kumar, B.E., M.Tech., Ph.D., Areas of Interest: Digital VLSI Circuit Design, Radiation Hardened IC Design, Energy Efficient Circuit Design, and Radiation Hardened Layout Design Techniques.
- Ms. Anupama, B.E., M.Tech., Areas of Interest: VLSI, Analog Electronics, and Digital Electronics.
- Mr. Krishna Dutt, B.Tech., M.Tech., Areas of Interest: Power Electronics. Advance Power Electronics, Power Converters, Control of Power Electronics Converters, Custom Power Devices, FACTs, and Machine.
- · Dr. (Ms.) Rinchin Wangziom Mosobi, B.E., M.Tech., Ph.D., Areas of Interest: Power Quality, Renewable Energy Sources.
- Dr. Madan Mohan Rayguru, B.Tech., M.Tech., Ph.D., Areas of Interest: Control Systems and Instrumentation and Soft Computing.

# **Achievements of the Department**

- Serving the nation for the last 81 years through education. Highly placed alumni in various reputed organizations and institutions across the world. The department is accredited by the National Board of Accreditation (NBA).
- The department has been identified as a Quality Improvement Program Research Centre. The department currently has 17 laboratories and 13 dedicated research areas equipped with state-of-the-art facilities with the latest versions of software platforms. The laboratories are equipped with sophisticated equipments, test setups, FPGA based data acquisition systems,

embedded controllers, Digital Signal Processors, Medium power Inverterconverters, various Electric Drives, PLCs, Power analyzers, spectrum analyzers, OPAL- RT, Phasor Measurement Units (PMUs), 300kV Impulse generator, 100 kV transformer etc. to name a few. 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 crores are presently underway in the department. The department is also engaged in consultancies in various fields of Electrical Engineering.

# Participation in Professional Development Programmes by Faculties

# **Prof. Mini Sreejeth**

**FDP** - "Power Quality Issues and Solutions for Grid Connected Electric Vehicles" organized by NITTTR Chandigarh during 14<sup>th</sup> - 19<sup>th</sup> March, 2022.

### Dr. Bhavnesh Jaint

**FDP** - "Machine Learning Applications in Signal Processing and Wireless Networks" organized by department of Electronics and Communication Engineering, DTU, Delhi, India during 20<sup>th</sup>-24<sup>th</sup> December, 2021.

## Ms. Anupama

#### **Online Short-Term Course**

"VLSI Devices and Communication Systems (VDCS)" organized by department of ECE of NIT Delhi during 23<sup>rd</sup> - 28<sup>th</sup> May, 2022.

**FDP** - "Machine Learning Applications in Signal Processing and Wireless Networks" organized by department of ECE, DTU, during 20<sup>th</sup> - 24<sup>th</sup> December, 2021.

#### Dr. Saurabh Mishra

#### Interdisciplinary Refresher Course/FDP

"Advanced Research Methodology Tools and Techniques" organized by Teaching Learning Centre, Ramanujan College University of Delhi, during 30<sup>th</sup> January - 14<sup>th</sup> February, 2021.

#### **Induction/Orientation Programme**

"Faculty in Universities/Colleges/Institutes of Higher Education" organized by Teaching Learning Centre, Ramanujan College University of Delhi, during 11th February -13th March, 2021.

# AICTE Training and Learning (ATAL) Academy Online Elementary FDP

"Emerging Technological Challenges in Electric Vehicle" organized by Annapoorana Engineering College during 7<sup>th</sup>-11<sup>th</sup> June, 2021.

# AICTE Training and Learning (ATAL) Academy Online Elementary FDP

"Microgrid An Opportunity: Electric Vehicles and Renewable Energy Resources" organized by Dayalbagh Educational Institute, Agraduring 5<sup>th</sup>-9<sup>th</sup> July, 2021.

# Faculty Visit to Other Institutions for Taking Expert Lectures and Other Academic Works

Prof. Vinod Kr. Yadav

Dr. Rajesh Kumar

"Research Challenges in Electrical Engineering and the solution with software"

Sai Ram Engineering College, Chennai during 20<sup>th</sup> -24<sup>th</sup> December, 2021. "Recent Advancements and Future Scope of Research in Electrical & Electronics Engineering"

RKGIT, Ghaziabad, India during 6<sup>th</sup> -10<sup>th</sup> September, 2021. "Artificial Neural Network and their applications" Department of EEE, MAIT, New Delhi during 16<sup>th</sup> - 20<sup>th</sup> August, 2021.

# **Important Professional Affiliations**

# **Members of IEEE**

Prof. Uma Nangia

Prof. Madhusudan Singh

Prof. Narendra Kumar (I) & (II)

Prof. N. K. Jain

Prof. Vishal Verma

Prof. Pragati Kumar

Prof. S. T. Nagarajan

Prof. Alka Singh

Prof. Dheeraj Joshi

Prof. Mukhtiar Singh

Prof. M. M. Tripathi

Prof. J. N. Rai

Prof. Priya Mahajan

Prof. R. S. Saha

Prof. D. R. Bhaskar

Sh. N. K. Bhagat

Prof. Sudarshan K Valluru

Prof. Ram Bhagat

Prof. Mini Sreejeth

Prof. Bharat Bhushan

Prof. Rachna Garg

Prof. Suman Bhowmick

Sh. D. C. Meena

Prof. M. Rizwan

Prof. Vinod Kumar Yadav

Sh. R. L. Meena

Sh. A. B. K. Bhattacharya

Dr. Prem Prakash

Dr. Bhavnesh Jaint

Sh. A. R. Kulkarni

Dr. Garima

Sh. Sikandar Ali

Dr. Ankita Arora

Dr. Anup Kumar Mandpura

Mrs. Shatakshi

Dr. Prakash Chittora

Mr. Shreyansh Upadhyaya

Mr. Abhishek Chaudhary

Dr. Rinchin W Mosobi

Dr. Mayank Kumar

Dr. Chaudhry Indra Kumar

Mr. Gaurav Kaushik

Ms. Anupama

Mr. Krishna Dutt

Mr. Rohan Pillai

Dr. Vanjari Venkata

Dr. Rajesh Kumar

Dr. M. M. Rayguru

#### Miscellaneous

Prof. Narendra Kumar (I) & (II) (Indian Society for Technical Education) Prof. Vishal
Verma (Power
and Energy
Society
and Power
Electronics
Society)

Dr. Bhavnesh Jaint (Indian Unit for Pattern Recognition and Artificial Intelligence)

Sh. A. R. Kulkarni (Institution of Engineers India) Dr. Garima (Indian Unit for Pattern Recognition and Artificial Intelligence)

# Teachers/Staff/Students Receiving Awards, Recognition from Government & Other Recognised Bodies

# Research Excellence Award on 3<sup>rd</sup> March, 2022

# **Faculty Members**

- · Prof. Vinod Kr. Yadav
- · Dr. Ram Bhagat
- Dr. Ankita Arora
- Dr. Mayank Kumar
- · Dr. Rajesh Kumar

#### Ph.D. Scholars

- Heman Saxena
- Rupam Singh
- Priyanka Chaudhary
- Aakash Kumar Seth
- Araadhya Mittal
- Abhishek Yadav
- Ajay Kumar
- Ajendra Singh
- Ajishek Raj
- Ajit
- Nandawadekar
- Ambrish Devanshu
- · Anunay Gupta
- Avdhesh Kumar
- Kushagra Bhatia
- Neha Khanduja
- Praveen Bansal
- Priyansh Kedia

# **Grants for Research Projects sponsored by Govt. Agency**

# Prof. Mini Sreejeth

₹ 30,00,000/- for Development and Deployment of Motor controller for Low to Medium Power Electric Vehicles by MeitY for a period of 3 years.

# Prof. V. Verma

₹ 22,53,600/- for Demonstration of grid supportive EV charger and charging infrastructure at LT level (D-EVCI) by DST on 12<sup>th</sup> June, 2018 for a period of 3 years.

₹ 1,63,00,000/- for Design and Demonstration of off- grid self-healing and sustainable DC community energy solutions by DST for a period of 3 years.

# PI- Dr. M. Rizwan

₹ 31,06,455 for Smart Dynamic energy management for built environment with integrated renewable energy by SERB, DST on  $27^{th}$  March, 2019 for a period of 3 years.

### PI- Dr. Hitesh Dutt Mathur

# Co PI- Dr. Dheeraj Joshi

₹ 16,83,100/- for IOT Based Energy Management System of Microgrid with Vehicle to Grid Feature by DST on 26<sup>th</sup> February, 2019 for a period of 3 years.

# **Professional Development Programme organized by the Department**

- One Month Summer Internship on "Electric Vehicle Infrastructure CoE for Electric Vehicle and Related technologies", organised by department of Electrical Engineering, DTU during 23rd May, - 22nd July, 2022.
- One-day workshop on "Electric Vehicle Infrastructure and technologies and opportunities" organized by department of Electrical Engineering, DTU, Delhi on 2<sup>nd</sup> June, 2022.

# 4.11 DEPARTMENT OF **ENVIRONMENTAL ENGINEERING**



Prof. S. K. Singh HoD

# ACADEMIC PROGRAMMES

M.Tech. (Environmental **Engineering**) Intake: 25+5 Admitted: 17

B.Tech. (Environmental **Engineering**) Intake: 77 Admitted: 76

Ph.D.: 8

# **LABORATORIES**

The department Environmental Engineering is actively involved in Research, Consultancy, training, and capacity building. It has well-established laboratories in the area of Environmental Engineering, Water Pollution, Air & Noise Pollution Control, Solid Waste Management, Microbiology, GIS and Remote Sensing. It also provides technical support to national agencies such as NGT, CPCB, NMCG, DPCC, CPWD, and more.

#### **ACHIEVEMENTS**

 Journal Publications 44

 Conference Publications 09

# SALIENT FEATURES

The department of Environmental Engineering offersB.Tech. M.Tech. and Ph.D. programs in Environmental Engineering. major in Environmental Engineering and three minors in 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 to produce technologically relevant Environmental Engineering graduates, post-graduates, and researchers through innovative applications of engineering, science & technology with a globally acceptable curriculum and teaching-learning environment; and create 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.



# **Professors: 2**

- Prof. S. K. Singh (HoD), B.E., M.Tech., Ph.D., FIE, FICS, FIEE. FIWRS, FIGS, FIAH, FIIBE, FIGV, FIOD, Areas of Interest: Solid waste processing, Wastewater treatment designs, Water treatment designs, Water quality modelling, Solar detoxification, EIA & Auditing.
- Prof. Anil Kumar Haritash, M.Tech., Ph.D., Areas of Interest: PAHs, Water Quality Assessment, Environmental Microbiology, Bioremediation, Constructed Wetlands, AOPs.

# **Assistant Professors: 4**

- Dr. Geeta Singh, B.Tech., M.Tech., Ph.D., Areas of Interest: Water and Wastewater Engineering, Hydrology, Environmental Hydraulics, Water Resources, Groundwater Engg.
- Mrs. Lovleen Gupta, B.E., M.S., Ph.D. (Pursuing from IIT Delhi), Areas of Interest: Source apportionment of air pollutants, Human Health Risk Assessment, Climate change, GHG emission calculations, Environmental Impact Assessment, Environmental Site Assessment.
- Dr. Rajeev Kumar Mishra, M.Sc., M.Tech., Ph.D., Areas of Interest: Environmental Implications of Urban Transport Systems, Urban Air Pollution Analysis & Modelling, Traffic Noise Pollution Modelling, Acoustics & Barrier Designing.
- Sh. Gour Anunay, B.E., M.E., Ph.D. (Pursuing), Areas of Interest: Environmental Engineering, Water & Wastewater Engineering, Air Pollution, Industrial Waste Management, Environmental Impact Assessment, System Simulation & Modelling.

4. ACADEMIC DEPARTMENTS

# **Achievements of the Department**

The department is actively engaged in providing technical support to NGT for cleaning river Yamuna, NMCG for cleaning river Ganga, CPWD, DJB, and many more institutions.

The department has inspected inter-mixing and trapping drains joining river Yamuna; and third-party evaluation of DDA projects related to drains in Delhi.

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).

The department undertakes and has completed performance audits of new, upcoming and existing STPs set up by DJB in Delhi.

The department released its yearly e-newsletter, Paryavarnam, on World Environment Day (7<sup>th</sup> June, 2022), showcasing the highlights of the current environmental issues and departmental achievements.

# Participation in Professional Development Programmes by Faculties

### **Prof. Anil Haritash**

Attended Confidential Workshop organized by National Testing Agency (NTA), Delhi, during 6th -10th June, 2022.

## Dr. Geeta Singh

Attended two-weeks industrial training on "Water Treatment" at M/S Vicinity Waters, Delhi, during 11th - 23rd July, 2022.

#### Mrs. Lovleen Gupta

Attended Faculty Development Programme on "NBA Accreditation Procedures" organized by IQAC, DTU, Delhi, and NITTTR, Chennai during 6<sup>th</sup> - 8<sup>th</sup> June, 2022.

## Mr. Gour Anunay

Completed eight modules as per Stage-I of the National Initiative for Technical Teachers Training, AICTE, February, 2022.

Attended Faculty Development Programme on "NBA Accreditation Procedures" organized by IQAC, DTU, Delhi, and NITTTR, Chennai, from 6th - 8th June, 2022.

# Dr. Rajeev Kumar Mishra

Attended Two Week Online Faculty Development Programme on "Alternative Energy Sources for Sustainable Development" organized bγ Department of Mechanical Engineering, DTU, Delhi, during 3<sup>rd</sup> -14<sup>th</sup> January, 2022.

Attended Faculty Development Programme on "NBA Accreditation Procedures" organized by IQAC, DTU, Delhi, and the National Institute of Technical Teachers Training and Research, Chennai, from 6th - 8th June, 2022.

# Faculty Visit to Other Institutions to Deliver Expert Lectures and Other Academic Works

#### **Prof. Anil Haritash**

**Topic-** Rainwater Harvesting during the National Conference on Recent Approaches for Sustainable Development

**Organization-** Kalindi College, Delhi University and MGICCC, Delhi

Duration- 11th April, 2022.

**Topic-** Build Back Wiser - Engineering the Future **Organization-** Institute of Engineers, Delhi State Centre

**Duration-** 4<sup>th</sup> April, 2022

## Sh. Gour Anunay Ashokkumar

**Topic-** Plastic bags (harmful impacts and feasible alternatives), Reuse plastic wastes (Best out of waste)

**Organization-** Deptt. of Environment, Govt. of NCT of Delhi

**Duration-** 17<sup>th</sup> May, 2022

**Topic-** Celebrating Earth Day 2022 - Invest in Our planet

**Organization-** Wetland Authority of Delhi, Deptt. of Environment, Delhi

**Duration-** 22<sup>nd</sup> April, 2022

#### Dr. Geeta Singh

**Topic-** Expert Advisory Committee (EAC) meeting on the Environmental Engineering Fundamentals Glossary

**Organization-** Commission for Scientific & Technical Terminology. **Duration-** 27<sup>th</sup> - 30<sup>th</sup> September, 2021

# Dr. Rajeev Kumar

**Topic-** Traffic Noise Propagation Model, Traffic Noise Mitigation Model

**Organization-** IIT Roorkee & IIT BHU

**Duration-** 11<sup>th</sup> - 12<sup>th</sup> March, 2022

**Topic-** Indoor Air Pollution and Associated Health Risks among Women & Children

**Organization-** National Institute of Disaster Management and World Resource Institute (WRI), Delhi

**Duration-** 27<sup>th</sup> September, 2021

# Details of Awards for Innovation Won by Department/Teachers/Research Scholars/Students.

- Prof. Anil Haritash received Research Excellence Award, DTU (2021) by DTU, Delhi, on 3<sup>rd</sup> March, 2022.
- Mrs. Lovleen Gupta received Research Excellence Award, DTU (2021) by DTU, Delhi, on 3<sup>rd</sup> March, 2022.
- Dr. Rajeev Kumar Mishra received Commendable Research Award, DTU (2021) by DTU, Delhi, on 3<sup>rd</sup> March, 2022.

# Functional MoUs with Institutions of National, International Importance, Other Universities, etc.

- MOU with Environmental Defense Fund (EDF) New York, USA (International).
- MoU with Canakkale Onsekiz Mart University, Canakkale, Turkey (International).
- MoU with Central Pulp and Paper Research Institute, Saharanpur, Uttar Pradesh (National).

# Details of Student Progression to Higher Education (Previous Graduating Batch) (the Current Year)

- Ms. Nimisha Singla (B.Tech.) was admitted to MS (Environment) at Stanford University (2022).
- Ms. Anoushka Raj (B.Tech.) was admitted to MS (Environment) Stanford University (2022).

# **Student's Achievements**

- Mr. Sankalp Suman (B.Tech.) won 1<sup>st</sup> prize with the title of "National Youth Icon 2022" in the National Environmental Youth Parliament.
- Yuvraj Rajak (B.Tech.) won a medal for Powerlifting.
- Satyam Dubey (B.Tech.) won a Bronze medal in Cricket in Agastya'22.

- Dushyant Yadav (B.Tech.) won a Bronze medal in Cricket in Agastya'22.
- Arshad Iqbal (B.Tech.) Health & Fitness Awareness.
- Mausam Raj (B.Tech.) taught around 60 children of NGOs, nearby slums, and construction workers, under NSS-DTU.
- Krish Shokeen (B.Tech.) worked Voice of Animals.
- Deepanshu Sharma (B.Tech.) worked under Unnat Bharat.
- Shubh Mlttal (B.Tech.) donated blood under Rakt-DTU, taught poor children under NSS-DTU.
- Pratham (B.Tech.) Lab-on-wheels, Taught children of construction workers at DTU.

# Details of Capability Enhancement and Development Schemes Organized by Department

One Day Seminar on Groundwater: Invisible Resource-Visible Impacts jointly organized by the department of Environmental Engineering, DTU and The Institution of Engineers, India (Delhi State Chapter) and Safety and Quality Forum, IEI Delhi on 22<sup>nd</sup> March, 2022.

Expert Lecture on
Living Sustainably
in Harmony with
Nature by Prof.
V. Subramanian,
Former Dean, SES,
JNU, Delhi and
Drawing Competition,
organized by
department of
Environmental
Engineering, DTU,
Delhi on 5<sup>th</sup> June,
2022.

Invited talk and interaction on Weather and Climate Services by Dr. S. D. Attri, Addl. Director General, India Meteorological department, Delhi on 21st October, 2021.

Invited talk and interaction on Environmental Management in Industries by Dr. Amit Tyagi, Head, Environment Division and Associate Vice President, Vedanta Limited on 7th March, 2022.

# Revenue Generated from Consultancy during the Current Year (INR in Lacs)

TPQA job awarded to department of Environmental Engineering, DTU for Rejuvenation of Drains in Dwarka, Delhi for an approximate cost of ₹ 75 Lacs for 3 years (2021-24).

# 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 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.

# 4.12 DEPARTMENT OF **HUMANITIES**



**Prof. Nand Kumar** HoD

**ACADEMIC PROGRAMMES** 

Ph.D.: 6

**LABORATORIES** 

Language Laboratory

# SALIENT FEATURES

The department of Humanities established in the year 1941 with a view to impart necessary soft skills to the graduating engineering students. Initially courses in English, Economics and Accountancy were taught to the students. With the growing impetus on new courses like Econometrics, Gender and Technology and timely revision of syllabi of subjects like Engineering Economics and Communication Skills, a crossover between technical and non-technical aspects of learning is facilitated.

The main objective is to give the students a comprehensive idea of the competition and the emerging work cultures to make them confident and market ready. The knowledge of different branches of engineering can be for the betterment of society and environment.

In the current scenario we need engineers who can develop technologies that are sustainable, user friendly, effective and adaptable with respect to changing social and cultural environment.

## **ACHIEVEMENTS**

Journal Publications

8



# **Professors: 2**

- Prof. Nand Kumar (HoD), M.A., Ph.D., Areas of Interest: Economics, Efficiency Analysis, International Economics, Banking and Finance.
- Prof. Seema Singh, M.A, Ph.D., Area of Interest: Economics.

# **Associate Professors: 2**

- Dr. Rajiv Ranjan Dwivedi, Ph.D., Areas of Interest: Diaspora Studies, Postmodern Fiction, South Asian Fiction, Cultural Studies, Translation Studies, Communication Skills, and Creative Writing.
- Mrs. Saroj Bala, M.Ed., M.Phil, Areas of Interest: English Literature (Indian Writing) & ELT.

# **Assistant Professors: 1**

• Mrs. Parinita Sinha, M.A., M.Phil., Areas of Interest: ELT, Indian Literature.

4. ACADEMIC DEPARTMENTS

# **Research Areas**

# **Economics:**

Women Education and Inclusive Growth, Banking and Finance, International Trade, Econometrics and its applications, Efficiency Analysis.

# English:

Diaspora Studies, Postmodern Fiction, South Asian Fiction, Cultural Studies, Translation Studies, English Language Teaching.

# **Achievements of the Department**

Research Excellence Award for Excellence in Research, DTU, Delhi on 3<sup>rd</sup> March, 2022 -

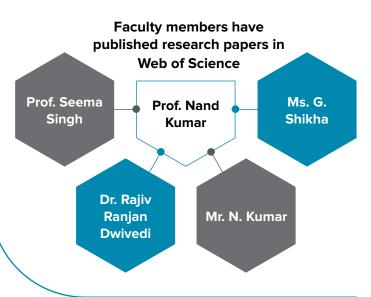
# **Faculty Members**

- Prof. Nand Kumar
- · Prof. Seema Singh

## Research Scholar

A. Shita

Research scholars have been awarded the degree of Ph.D. Dr. Shivangi Dr. Gaurav Dr. Aynalem **Bhatia** Dawar **Shita** 



# **Details of Capacity Enhancement and Development Schemes Organized by the Department**

A two-days workshop was conducted by the department of Humanities, DTU on the theme "Research in Literature: State and Directions" during 7<sup>th</sup>-8<sup>th</sup> October, 2021.

Conducted a workshop activity on "Poetry Composition" organized by Govind Ballabh Pant Engineering College, DESU for its B.Tech. students on 28th January, 2022.

# **Journals / Books / Chapters Publications by Faculty Members**

#### Dr. Rajiv Rajan Dwivedi

Published a book on "Bees Pranay ki Kavitayen aur Ek Nairashya ka Geet" (Hindi translation of Pablo Neruda's Twenty Love Poems and a Song of Despair) Acumen Publications, Netherlands, 2021 (ISBN: ISBN:978-900-83202-60-0).

Published a book on "Truthsmiths" and other Poems (A Collection of English Poems). Acumen Publications, Netherlands, 2021 (ISBN: 978-90-83024-29-5).

Published a book on "Mushkil Mein Prashn" (A Collection of Hindi Poems). Vachi Prakashan, Delhi, 2021. (ISBN: 978- 81-947927-5-8).

Published a book on "Parinay" (Khand Kavya). Vachi Prakashan, Delhi, 2021. (ISBN: 978-81-947927-4-1).

Published a paper on "Experimentation with Twitter Fiction: A Brief Study with Reference to Chindu Sreedharan's Epic Retold". Digitalization of Culture through Technology, edited by Deepanjali Mishra and Sasmita Rani Samanta. Routledge, 2022.

Published a Book Chapter on "Feministic Reading of Shiva Trilogy and the Palace Illusions". Voicing the Voiceless: Literary Representation of the Gendered Subalterns. Author's Press, Delhi, January, 2022, pp. 69-80.

## Prof. Seema Singh

Presented a paper on "Investigating the Status of Women Engineers in Education and Employment" during the COVID-19 Pandemic challenges 2022, 13, 27. https://doi.org/10.3390/ challe13010027.

Published a paper on "Climate Change, SDGs and Revamping Engineering Education for a Circular Economy": Implications for SIDS", (2022), Institution of Engineers Mauritius (IEM) Journal, issue no. 16, pp. 36-45.

Published a paper on "Women on Board": Tackling Gender Diversity, the Global Analyst, in October, 10 (10): 39-42.

### Mrs. Saroj Bala

Published a chapter on "Feministic Reading of Shiva Trilogy and The Palace of Illusions" in the Author's press Anthology on Voicing the Voiceless: Literary.

Represented the Gendered Subalterns in January, 2022. ISBN 978-93-5529-240-7.

#### **Participation Professional** in **Development Programs** by **Faculties**

- Dr. Rajiv Ranjan Dwivedi has attended one-week Information Literacy Workshop on "E-Resources: A Gateway 5<sup>th</sup>Research. edition (2021)" conducted by the Central Library of DTU during 6th - 10th September, 2021.
- Mrs. Saroj Bala has attended one-month workshop cum certificate course on "Research Methodology. Academic Writing, and Publishing in English RMWCC 2022" organized by AIFEST; Institute Of Aeronautical Engineering, Hyderabad (IARE).
- Mrs. Saroj Bala has attended oneweek online FDP on "How to develop and Publish Quality Research paper in High Impact Journals" organized by St. Vincent Pallotti College, Raipur during 15<sup>th</sup> - 19<sup>th</sup> February, 2022.
- Mrs. Saroj Bala has attended one-week online international FDP on "Curriculum" Development, Research and Publication Ethics" organized by department of English and other Foreign Languages, SRM Institute of Science & Technology, Chennai, DTU during 2<sup>nd</sup> - 9<sup>th</sup> August, 2021.
- Mrs. Saroj Bala has attended one-week online National level FDP on "New Paradigms in Teaching & Learning English" organized by department of Humanities, St. Claret College, Bengaluru during 23rd - 28th August, 2021.
- Mrs. Saroj Bala has attended one-week online National level FDP on "Professional" Etiquette" organized by department of Management & amp; department of Basic Science and Humanities, IEM & ELTAI during 31st August - 4th September, 2021.
- Mrs. Saroj Bala has attended one-week online National level FDP on "Enhancing

- Teaching & Learning Skills through Acquisition of English Language" organized by department of English. Govt. D. S. V. Sanskrit College, Raipur during 13th -18th September, 2021.
- Mrs. Saroj Bala has attended one-week online National level FDP on "Innovation" & Best Practices in HEIs in the Context of NEP-2020" organized by department of English, Ayya Nadar Janaki Ammal College, Tamil Nadu during 21st -26th September, 2021.
- Prof. Seema Singh has attended GWI Global North-South Women, Security, Peace and Leadership Dialogue webinar, on 7<sup>th</sup> August, 2021.
- Mrs. Parinita Sinha has attended oneweek online FDP on "How to develop and Publish Quality Research paper in High Impact Journals" organized by St. Vincent Pallotti College, Raipur during 15<sup>th</sup>-19<sup>th</sup> February, 2022.
- Mrs. Parinita Sinha has attended a three-days FDP on "NBA Accreditation Procedures" organized bν DTU; Conducted by National Institute of Technical Teachers Training and Research (NITTTR) Chennai (6<sup>th</sup>-8<sup>th</sup> June, 2022) E Resources: A Gateway for Research during 6th -10th September, 2021.

# **Faculty Visit to Other Institutions** for Taking Expert Lectures and **Other Academic Works**

- Prof. Nand Kumar Visited Bhagini Nivedita College, University of Delhi as Guest of Honor in June. 2022.
- Dr. Rajiv Ranjan Dwivedi has attended lecture on "Exploring the Novelistic Genre in India with special reference to Bangla Mahabharata Narratives in the Medieval Period" in a two-days international conference on "Narratives, Self and Identities: Traditions and Innovations

- during 30<sup>th</sup> 31<sup>st</sup> August, 2021, organized by School of Arts, Humanities and Social Sciences, Reva University, Bengaluru, India.
- Dr. Rajiv Ranjan Dwivedi has attended lecture on "Emergence of Mythical Fiction as Popular Literature" in the two-days International conference on "Narratives, Self and Identities: Traditions and Innovations" organized by Reva university, Bengaluru & ISPELL Liverpool John Moore's University, England during 30<sup>th</sup>-31<sup>st</sup> August, 2021.
- Dr. Rajiv Ranjan Dwivedi has attended lecture on "Indian OTT Platforms in Post Pandemic World: An Investigation" in an 8<sup>th</sup> JGU International Literary Conference (Online) on India in the Literary Imagination organized by the English Literary Society, O. P. Jindal Global University during 18<sup>th</sup> - 20<sup>th</sup> July, 2022.
- Dr. Rajiv Ranjan Dwivedi has attended lecture on "OTT Platforms and Their Psychological Impact on the Indian Society" in an International Virtual Conference on Emerging Trends and Challenges in English Literature, Art and Culture held on 22<sup>nd</sup> April, 2022 organized by Post Graduate department of English, Sri Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib (Rupnagar) Punjab, India.
- Dr. Rajiv Ranjan Dwivedi has attended lecture on "Power Politics in the Shiva Trilogy by Amish" in the Multidisciplinary International conference 2022 on Research in Humanities and Social Sciences: Findings and Challenges organized by O. P. Jindal University during 18<sup>th</sup> - 20<sup>th</sup> July, 2022.
- Dr. Rajiv Ranjan Dwivedi has attended lecture on "Evolution of Chandramukhi in Devdas Film Adaptations": A Postmodernist Study" in an Online

- International Conference on Recent Trends in Humanities, Linquistics, Literature Education (HLLE-2022) organized by department of Linguistics and Literature, School of Humanities and Liberal Arts, Cluster University of Jammu, Jammu, India in Collaboration with Vidya Kutir Foundation, New Delhi on 27th March. 2022.
- Dr. Rajiv Ranjan Dwivedi has attended "Experimentation lecture on with Twitter Fiction: A Brief Study with Reference to Chindu Sreedharan's Epic Retold Digitalization of Culture through Technology" in the International Conference on Digitalization Revitalization of Cultural Heritage through Information Technology-ICDRCT-21 organized by Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, Odisha, India during 23<sup>rd</sup> - 24<sup>th</sup> November, 2021.
- Dr. Rajiv Ranjan Dwivedi has participated as an Expert, Interview Board of Orissa School Education for selection of PGT; TGT English, during 28<sup>th</sup> May - 4<sup>th</sup> June and 16<sup>th</sup>-19<sup>th</sup> August, 2021.
- Dr. Rajiv Ranjan Dwivedi worked as a ResourcePersonon"Translation and Trans creation: A Perspective" on 20<sup>th</sup> January, 2022 in an FDP themed Reflections on Current Trends in Language, Literature and Society during 17<sup>th</sup> - 21<sup>st</sup> January, 2022, organized by the department of Humanities, NIT, Puducherry.
- Dr. Rajiv Ranjan Dwivedi chaired a technical session at International Online Conference on Digitalization and Revitalization of Cultural Heritage Through Information Technology-(ICDRCT-21) on 24<sup>th</sup> November, 2021.
- Dr. Rajiv Ranjan Dwivedi has attended Expert lecture on "Relevance of Humanities in the Changing World" organized by the department of Humanities, K. R. Mangalam University,

- Gurugram, Haryana, India on 12<sup>th</sup> October, 2021.
- Dr. Rajiv Ranjan Dwivedi has Participated in a webinar organized on "The Wasteland: Poetic Journey of 100 Years" by department of English, Patna University, Patna on 27th August, 2021.
- Mrs. Saroj Bala Visited NIT Delhi, NSUT and DTTE respectively for taking lecture and other academic works.
- Mrs. Saroj Bala has appeared as subject expert for interview for CAS in DTTE on 7<sup>th</sup> October, 2021.
- Mrs. Saroj Bala was a keynote speaker for Online Webinar organized by SMP PG Girls College, Madhavpuram, Meerut on 8<sup>th</sup> February, 2022 (Employability Skills for 21<sup>st</sup> Century).
- Mrs. Saroj Bala visited MAIT, GGSIP University on 25<sup>th</sup> August, 2021 (21<sup>st</sup> Century Communication Skills for Professionals) department of English, FMEH, Manav Rachna University on 15<sup>th</sup> September, 2021 (Employability Skills for the New Age Professionals) Member, Interview Board of Orissa School Education for selection of PGT; TGT English, during 16<sup>th</sup>-19<sup>th</sup> August, 2021, and 4<sup>th</sup>-7<sup>th</sup> June, 2022.
- Mrs. Saroj Bala was Expert for the viva in MAIT, IP University, Delhi (7<sup>th</sup>-14<sup>th</sup> January, 2022), Bhartiya Vidyapeeth, IP University Delhi (11<sup>th</sup>-12<sup>th</sup> January, 2022), GTBIT, IP University (13<sup>th</sup> January, 2022), BPIT, IP University (15<sup>th</sup> January, 2022).
- Prof. Seema Singh visited for academic work on "Water and Environmental Sustainability" on 3<sup>rd</sup> September, 2021 in ICWES 18 organized at the University of Warwick, UK.
- Prof. Seema Singh visited for academic work on "Women Empowerment through Financial Inclusion" at the

- panel discussion in technical session III in Financial Inclusion and Literacy for Women at IICA, during Azadi ka Amrit Mahotsav, Ministry of Corporate Affairs, Government of India, Maneshar on 12<sup>th</sup> June, 2022.
- Prof. Seema Singh visited for academic work on "Enhancing Research Culture in STEM tertiary Education in India" at the Panel Discussion on Reimagining a STEM Research Culture on 7<sup>th</sup> May, 2022.
- Prof. Seema Singh visited for academic work on "Women in engineering: Aspiration and constraints, threats and opportunity" Webinar on Female Retention and Leadership in Engineering, organized by WEFO and WIE on 26<sup>th</sup> November, 2021.
- Prof. Seema Singh visited for academic work on "Investigating Gendered Journey from Engineering Education to Employment in India to achieve Sustainability", in the Panel discussion on Gender, sustainability and research capacity building in the Global South on 28th October, 2021.
- Prof. Seema Singh visited for academic work on "Women in the Indian Engineering Labor Market" in the Panel on Woman in Industry and Academia IEOM Society India Conference, Bangalore, India on 18<sup>th</sup> August, 2021.
- Prof. Seema Singh visited for academic work on "Gendered Gap: Perception of STEM in last 75 years of Independent India", in the panel on COVID-19 impacts on women in STEM and perspectives at the meeting of Asia and Pacific Women in Science and Technology (MAPWiST), South Korea on 16<sup>th</sup> August, 2021.
- Prof. Seema Singh Participated as an Expert on Women in STEM 39; in the

INWES-KWSE GISE Global Project on Women in STEM funded by National Research Foundation of South Korea and the Ministry of Science and ICT, South Korea on 31st December, 2021.

- Prof. Seema Singh participated as INWES Board Member on project titled, "Reimagining a STEM Research Culture: Lessons Learnt from 20 years of Evolution for Inclusive Representation in Science and Engineering" University of Warwick, UK INWES during 1<sup>st</sup> March - 20<sup>th</sup> July, 2022.
- Prof. Seema Singh participated as Expert of Women in Engineering for India on the project titled, "Globalizing Century Women's Stories in Science and Technology" with university of Leeds, during 1st April - 10th May, 2022.

# Faculties provided with Financial Support

Dr. Rajiv Ranjan Dwivedi received the membership of "Heritage Society", based in Patna, Bihar with financial support from the DTU, Delhi.

Mrs. Saroj Bala received the membership of "Heritage Society", based in Patna, Bihar with financial support from the DTU, Delhi.

# **Projects**

Prof. Seema Singh is the P. I. of BRPID Project of GWI on, "Enhancing Employability Skills for Empowerment of Girls and Young Women" up to 30<sup>th</sup> September, 2021.

# Research Papers Publications in Web of Science by Research Scholars

- G. Bithika and R. R. Dwivedi, Ahimsa and Anrsamsya Dharma from the Mahabharata for a Sustainable Universe, Journal of Dharma, vol. 47, no. 2, pp. 203-216, 2022 (Indexed by AHCI and Scopus).
- K. Khyati and N. Kumar "Are Exports and imports of India's trading partners cointegrated? Evidence from the Fourier bootstrap ARDL procedure" Empirical Economics, vol. 62, pp. 1177-1191, 2022 (SSCI).
- M. Addissie, and S. Singh "Factors effecting women's choice of learning Engineering and Technology Education in Ethiopia" in *Sustainability* 2021, *13*(4), 2246; <a href="https://doi.org/10.3390/su13042246">https://doi.org/10.3390/su13042246</a>.

# 4.13 DEPARTMENT OF **INFORMATION TECHNOLOGY**



**Prof. Kapil Sharma** HoD

# **ACADEMIC PROGRAMMES**

**B.Tech.** (Information Technology) Intake : **182** Admitted : 181

M.Tech. (Information System) Intake: 25+5 Admitted: 23

Ph.D.: 14

# **LABORATORIES**

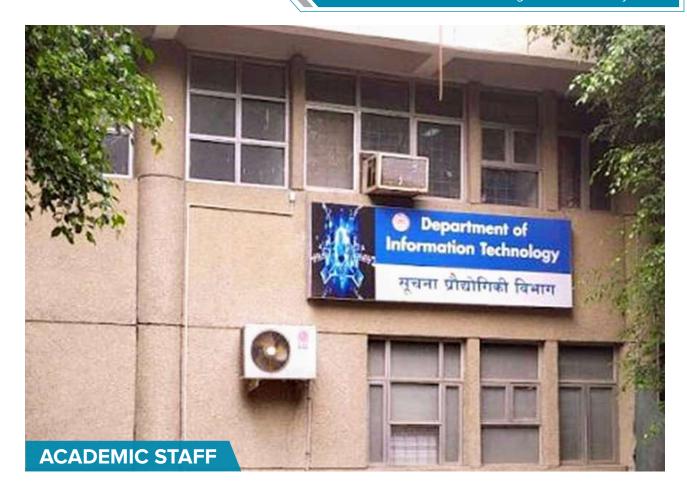
Department has developed various State- of- the- Art Laboratories in various fields of Information Technology like Computer Networks Lab. Web Engineering Programming Lab, Information and Security Lab, Biometric Research Lab and many others for U.G. / P.G. / Ph.D.

#### **ACHIEVEMENTS**

•	Journal Publications	83
•	Conference Publications	73
•	Book Chapters	06
•	Citations	2147

# 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 defined curriculum, 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 various fields. The department offers three minor UG specializations, one in IT for other disciplines and two in Cyber Forensics AI & ML for all disciplines. Currently, the Department offers Doctorate in various emerging technologies like Machine Learning and Deep Learning, cyber security, Computer Vision, Natural Language Processing, Cloud and IoT security, Mobile Security, Image Processing etc. The department has an excellent record of placement. Many students go on to pursue higher studies and entrepreneurship. The department also has an active student society; SITE (Society for Information Technology Engineers) and contributes significantly in professional activities undertaken by IEEE and IET student chapters. The department has high end computing infrastructure enabled with GPU. One of the faculty members, Prof. Dinesh K. Vishwakarma of the department featured in top 2% scientists of the world as per reports released by the Stanford University in October 2021. Department has completed one sponsored research project from DRDO and two research projects are under review.



# **Professors: 3**

- Prof. Kapil Sharma (HoD), B.E., M.Tech., Ph.D., Areas of Interest: Artificial Intelligence, Optimization, Evolutionary Computation, Software Engineering, Malware Analysis.
- · Prof. Dinesh Kumar Vishwakarma, B.Tech., M.Tech., Ph.D., Areas of Interest: Machine/Deep Learning, Computer Vision, Human Action and Activity Recognition, Sentiment Analysis, Fake News Analysis, Rumor Detection. Statistical Data Analysis.
- Prof. Seba Susan, B.Tech., M.E., Ph.D., Areas of Interest: Pattern Recognition, Machine Learning, Computer Vision, Natural Language Processing, Data Mining and Soft Computing.

# **Associate Professors: 1**

• Dr. Virender Ranga, B.Tech., M.Tech., Ph.D., Areas of Interest: Wireless Adhoc & Sensor Network, Evolutionary Computations in Computer Networks, Machine Learning **Techniques** Networking, Security Issues in Cloud Computing, Security Issues in Internet of Things (IoT), FoG Computing, Internet of Robotic Things.

# **Assistant Professors: 7**

• Dr. Ritu Agarwal, B.Tech., M.Tech., Ph.D., Areas of Interest: Information Security, Digital Forensics, Data Structures. Analysis and Design of Algorithms, Cyber Security, Pattern Mining.

4. ACADEMIC DEPARTMENTS

- Ms. Anamika Chauhan, B.Tech., M.Tech., Areas of Interest: Sensor Networks. Mobile and Vehicular Ad-hoc Networks. Internet of Things.
- Dr. Priyanka Meel, B.Tech., M.Tech., Ph.D., Areas of Interest: Artificial Intelligence, Optimization Algorithms, Data Analytics, Social Media Analysis, Fake News and Rumor Detection.
- **Dr. Jasraj Meena,** B.Tech., M.Tech., Ph.D., Areas of Interest: Parallel and Distributed Computing, Cloud Computing, Workflow Scheduling, Internet of Things with Machine Learning.

- Mr. Rahul Gupta, B.Tech., M.Tech., Areas of Interest: Mobile Security, Artificial Intelligence, Machine Learning and Social Media Mining.
- Dr. Bindu Verma, B.Tech., M.Tech., Ph.D.. Areas of Interest: Image Processing, Computer Vision, Hand Gesture, Affective Computing, Emotion Recognition, Deep Learning, Machine Learning.
- Ms. Varsha Sisaudia, B.Tech., M.Tech., Areas of Interest: Image Processing, Evolutionary Algorithms, Soft Computing, Machine Learning.

# **Achievements of the Department**

- of An amalgam Computers 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 multimedia, scientific research, business intelligence solutions and knowledge discovery in databases. The department offers B.Tech. in Information Technology and 182 students are admitted this year. The course is designed in such a way to provide the students with fundamental concepts and tools related to thier domain, B.Tech. (Information Technology) Program 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 Systems with an annual intake of 25+5 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 related to upcoming I.T. fields. A large number of B.Tech. (IT) students have obtained admissions and foreign 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 а student society called the "Society for IT Engineers (S.I.T.E.)" and the students regularly participate in national and international events like hackathons and other technical and non-technical competitions. The department aims to

encourage 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.

# Faculties Provided with Financial Support to Attend Conferences, Seminars, etc.

### **Prof. Kapil Sharma**

₹ 6,555/- from "Professional Development Fund" for the renewal of IEEE membership.

## Dr. Virender Ranga

₹ 14,000/- from "Professional Development Fund" for the renewal of IEEE Membership.

# Dr. Ritu Agarwal

₹ 500/- for attending joint FDP on "Recent Trends in Robotics jointly organized by Electronics and ICT Academies at IIT Roorkee, MNIT Jaipur, NIT Patna, and PDPM IIITDM Jabalpur" in July, 2022.

### Dr. Priyanka Meel

₹ 15,340/- from "Professional Development Fund" for Life membership of CSI and ISTE.

#### Dr. Bindu Verma

- ₹ 3,540/- from "Professional Development Fund" for Lifetime ISTE Membership.
- ₹ 11,800/- from "Professional Development Fund" for Lifetime CSI Membership.
- ₹ 6,652/- from "Professional Development Fund for the IEEE Young Professional Membership.

#### Prof. Seba Susan

- ₹ 10,828/- from "Professional Development Fund" for the renewal of IEEE Membership.
- ₹ 18,231/- from "Professional Development Fund" to attend the PMDB 2022 workshop of the DASFAA 2022 held in April, 2022.

#### Dr. Jasraj Meena

₹ 3,243/- from "Professional Development Fund" for the renewal of IEEE Membership.

#### Mr. Rahul Gupta

- ₹ 18,577/- for purchase of "IEEE membership, Life time CSI Membership and Life time ISTE Membership".
- ₹ 1,450/- to attend a two-weeks "Refresher Course" during 22<sup>nd</sup> January 5<sup>th</sup> February, 2022.
- ₹ 1,950/- to attend four-weeks "Online Induction Training / Orientation Program" in March, 2022.

#### Ms. Varsha Sisaudia

- ₹ 1,450/- to attend a two-weeks "Refresher Course" during 22<sup>nd</sup> January 5<sup>th</sup> February, 2022.
- ₹ 18,577/- for purchase of "IEEE Membership, Life time CSI Membership and Life time ISTE Membership".

# Participation in Professional Development Program by Faculties

#### Ms. Varsha Sisaudia

Attended a two-weeks refresher course on "Advanced Research Methodology" organized by Ramanujan College, DU in February, 2022.

Participated in one-month Induction/ Orientation Program organized by Ramanujan College, DU during February-March, 2022.

# Dr. Virender Ranga

Attended a five-days workshop on "Automatic Speech Recognition" organized by NIT, AP during February, 2022.

Participated in Faculty Development Program on "Artificial Intelligence, Robotics and Automation" organized by Banasthali Vidyapith, Rajasthan under CURIE- Artificial Intelligence, DST, Govt. of India during March, 2022.

Attended a Short-Term Course on "Smart Grids & Power System (SGPS)" organized by NIT, Meghalaya during 21st - 25th March, 2022.

Participated in Faculty Development Program on "NBA Accreditation Procedure" organized by IQAC cell of DTU during May, 2022.

# Mr. Rahul Gupta

Attended a two-weeks Refresher Course on "Advanced Research Methodology" organized by Ramanujan College, DU during February, 2022.

Participated in one-month "Induction/ Orientation Program" organized by Ramanujan College, DU during February - March, 2022.

## Dr. Ritu Agarwal

Attended a workshop on "Intellectual Property Rights (IPRs) & IP Management for Start-Up" organized by the department of Software Engineering in April, 2022.

Attended a Short-Term Course on "Smart Grids" & Power System (SGPS)" organized by NIT, Meghalaya during March, 2022.

Participated in webinar on "National Education Day" organized by HRDC, DTU in association with IIC-DTU and DTU - IIF held in November, 2021.

Participated in E-Workshop on "Entrepreneurial Ecosystem and start-up" organized by ECE, DTU in September, 2021.

Participated in E-Workshop on "Innovation and Entrepreneurship" organized by the Dept. of Bio-Tech, DTU in September, 2021.

Attended a five-days Information Literacy Workshop on "E-Resources: A Gateway for Research, 5<sup>th</sup> edition (2021)" during September, 2021.

Participated in E -Workshop on "Innovation and Startup Ecosystem Enablers during Region / State / National Level" organized by Dept. of ECE, DTU in June. 2021.

#### Ms. Anamika Chauhan

Attended a Short-Term Course on "Smart Grids & Power System (SGPS)" organized by NIT, Meghalaya during 21st - 25th March, 2022.

# Dr. Priyanka Meel

Attended a five-days Information Literacy Workshop on "E-resources: A gateway for research" organized by DTU during September, 2021.

Participated in Faculty Development Program on "NBA Accreditation Procedure" organized by IQAC cell of DTU during May, 2022.

#### Dr. Jasraj Meena

Attended a six-days workshop on "Exploring Engineering", organized by Center for Extension and Field Outreach, DTU during June, 2022.

Participated in Faculty Development Program on "NBA Accreditation Procedure" organized by IQAC cell of DTU during May, 2022.

#### Dr. Bindu Verma

Attended one-weeks FDP on "Research Methodology and Introduction to Modelling Techniques" organized by DTU during July, 2022.

Attended FDP on "NBA Accreditation Procedure" organized by IQAC cell of DTU during May, 2022.

Attended a Interdisciplinary refresher course on "Advanced Research Methodology" 2022 organized by Teaching Learning Centre, Ramanujan College, DU during February, 2022.

Completed a four-weeks Induction Program for "Faculty in Universities/College/Institutes of Higher Education" organized by Teaching Learning Centre, Ramanujan College, DU during February - March, 2022.

Attended two-weeks summer school on "Industry 4.0 Security and Technological Aspects (SSIST'2021)" technically sponsored by IEEE UP Section, organized by the Dept. of CSE of JIIT, Noida during August, 2021.

# Faculty visit to other Institutions for Taking Expert Lectures and other Academic works

- Dr. Dinesh K. Vishwakarma delivered an invited talk on "Fake News Analysis using LSTM" in three-days National Virtual Workshop on "Advances in Artificial Intelligence and Cyber Security" organized by central university of Haryana, central library & department of computer science & engineering, during 30<sup>th</sup> November - 2<sup>nd</sup> December, 2022.
- Dr. Dinesh K. Vishwakarma was a session chair in 3<sup>rd</sup> International Conference on "Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET 2021)" organized by Madhav Institute of Technology & Science, Gwalior, India in November, 2021.
- Dr. Dinesh K. Vishwakarma was a session chair in 3<sup>rd</sup> International Conference on "Artificial Intelligence and Speech Technology (AIST2021)" organized by

- Indira Gandhi Delhi Technical University for Women on 13<sup>th</sup> November, 2021.
- Dr. Dinesh K. Vishwakarma was a key note speaker in an International Conference on "Information Systems and Computer Networks (ISCON-2021)" held on 22<sup>nd</sup> - 23<sup>rd</sup> October, 2021 at GLA University, Mathura (UP).
- Dr. Dinesh K. Vishwakarma gave expert talk on "Role of Machine learning and Deep Learning towards progress of IOT" in FDP on "Machine Learning and Latest Optimization Techniques" during 11<sup>th</sup> - 16<sup>th</sup> October, 2021 at Vivekananda Institute of Professional Studies, AU Block (Outer Ring Road), Pitampura, Delhi.
- Dr. Dinesh K. Vishwakarma gave expert talk on "Fake News Detection - A Data Mining Perspective" in a seminar on 24<sup>th</sup> August, 2021, at CSE, SRM Institute

- of Science and Technology, Chennai -600026, TN, INDIA.
- · Dr. Dinesh K. Vishwakarma attended "Board of Studies" meeting at MITS Gwalior.
- · Dr. Dinesh K. Vishwakarma attended "Board of Studies" meeting at IGDTUW, Delhi.
- Dr. Dinesh K. Vishwakarma was a member of "Board of Studies" Pondicherry Central University, Pondicherry.
- Prof. Seba Susan was a Keynote Speaker in the "International Conference CVR 2021" held on August, 2021.
- Dr. Virender Ranga was acting as member of "BoS of Computer Science & Engineering department" at RTU, Rajasthan.
- · Dr. Ritu Agarwal was a session chair of "WIE, IEEE DELCON 2022, organized by IEEE Delhi" section, convened by IEEE NSUT SB at Netaji Subhash University of Technology, New Delhi, India, held during 11th - 13th February, 2022.
- Agarwal contributed Dr. Ritu "Curriculum Revision Process at DSEU" during June - August, 2021.
- · Dr. Ritu Agarwal delivered mentoring sessions at SKV for girl students of class IX<sup>th</sup> and X<sup>th</sup> on "Towards a Business Mindset" as an Innovation ambassador nominated by DTU.
- · Dr. Ritu Agarwal delivered mentoring sessions at SKV for girl students of class X<sup>th</sup> on "Intellectual Property Rights" as an Innovation ambassador nominated by DTU, Delhi.
- Dr. Jasraj Meena was an External Practical Examiner at Vivekananda Institute of Professional Studies for

- B.Tech. Program, AI & DSB, Subject Code ES153, Subject Programming in C Lab on 28th March, 2022.
- Dr. Bindu Verma worked as a content writer for IGNOU New Delhi in the year 2021.
- Dr. Bindu Verma worked for National Testing Agency as an Item Writer and Expert and Proof Reader for Computer Science / Informatics Practices in the vear 2022.
- · Dr. Bindu Verma served as Reviewer of many papers of IEEE Transactions on Circuits and Systems for Video Technology Journal.
- Dr. Bindu Verma served as a Reviewer of Journal Pattern Recognition, Elsevier.
- Dr. Bindu Verma served as a Reviewer of Journal Telecommunication Computing Electronics and Control.
- Dr. Bindu Verma served as a Reviewer of Hindwai Journal, Peer Journal.
- Dr. Bindu Verma served as a TPC member in the "4th International Conference on Machine Intelligence and Signal Processing (MISP 2022)" organized by department of Computer Science and Engineering, National Institute of Technology, Raipur, India during 12th -14th March. 2022.
- Dr. Bindu Verma worked as a Program Committee Member and Reviewer in the International Conference on "Data Science and Applications (ICDSA 2022)" held during 26<sup>th</sup> - 27<sup>th</sup> March, 2022.
- Dr. Bindu Verma worked as a TPC member in the 1st International Conference on "Informatics (ICI)" organized by Jaypee Institute of Information Technology during 14th - 16th April, 2022.

# Collaborative Activities for Research, Faculty Exchange, Student **Exchange**

### Dr. Virender Ranga

Undertaking collaborative research with National Institute of Technology Kurukshetra, Haryana, India with jointly supervising 4 Ph.D. candidates in the area of "SDN Security, Network Security, UAV and Internet of Robotics Things".

Undertaking collaborative research with Deenbandhu Chhotu Ram University of Science and Technology, (formerly known as Chhotu Ram State College of Engineering), Murthal, Sonipat, Haryana, with jointly supervising one Ph.D. candidate in the area of "Internet of Things Security".

Undertaking collaborative research with Kurukshetra University, Kurukshetra with jointly supervising one Ph.D. candidate in the area of "Security Issues in FoG Computing".

Member of editorial board of various reputed journals like "Journal of Applied Computer Science & Artificial Intelligence, International Journal of Advances in Computer Science and Information Technology (IJACSIT), Circulation in Computer Science (CCS), International Journal of Bio Based and Modern Engineering (IJBBME) and International Journal of Wireless Networks and Broadband Technologies".

### Prof. Dinesh K. Vishwakarma

Hosted an "International Workshop on "Computer Vision and Deep Learning" in 16th International Conference on Signal Image Technology & Internet based Systems, Dijon, France.

Conducted a Summer Internship (May,-July, 2022) in a collaboration with Dr. Mukesh Prasad, UTS Sydney, Australia and Dr. Rajiv Ratan, IIIT Delhi.

#### Prof. Seba Susan

Guiding a Ph.D. student from Bharat Electronics (BEL).

Reviewer of many reputed journals like "Neurocomputing, Expert systems with Applications, IEEE Transactions on Cybernetics, Automation in Construction, Applied Soft Computing, Artificial intelligence review, IEEE Transactions on Neural Networks".

# **Teachers who received Awards & Recognition**

### Prof. Kapil Sharma

Research Excellence Award in two categories (Premium and Commendable) by DTU.

Two Premium Research Awards and three Commendable Research Awards received.

# **Dr. Bindu Verma**

Received Commendable DTU Research Excellence Award in March, 2022.

### Prof. Seba Susan

Received Commendable Research Excellence Award in March, 2022.

Best paper award in the PMDB 2022 workshop of DASFAA 2022 conference.

Her student's paper was presented in FLAIRS 2022 International conference and won the best student paper award.

# Prof. Dinesh K. Vishwakarma

Research Excellence Award in two categories (Premium and Commendable) by DTU.

Associate Editor, IEEE Transactions on Circuit Systems for Video Technology.

## Dr. Priyanka Meel

Received Commendable Research Excellence Award for the year 2021.

# Dr. Virender Ranga

Has elevated to IEEE Senior Member in February 2022.

Acting Ambassador of Bentham Science in Asia Region.

Associate Editor of The Asian Journal of Convergence in Technology (AJCT).

# Students Provided with Financial Support to Attend Conferences, Seminars, etc.

- Mr. Vikas Damle, M.Tech. ISY student under the guidance of Prof. Seba Susan received financial support from the university of ₹ 8,393/- to attend and present the paper at the International Conference CONIT 2022.
- Ms. Shrutikirti Singh, M.Tech ISY student under the guidance of Prof. Seba Susan received financial support from the university of ₹ 5,500 to attend and present the paper at the International Conference IHIC 2022.
- Ms. Ruchi Holker, Ph.D. student under the guidance of Prof. Seba Susan received financial support from the university of 500 Euro to attend and present the paper at the International Conference BI 2022.
- Ms. Nishtha Verma, M.Tech. student quidance of Dr. under the Aggarwal received financial support for the research paper at a conference "International conference on and Cyber-Physical communications Engineering" (ICCCE-2022) held during April, 2022.
- Ms. Faeza Hasani, under the guidance of Dr. Bindu Verma received ₹ 9,000/- as financial support to present paper in 3<sup>rd</sup> IEEE Conference on "Data Science and Applications" at Jadavpur University, Kolkata, India during 26<sup>th</sup> - 27<sup>th</sup> March, 2022.

# **Details of Students Progression to Higher Education**

Ms. Kriti Arora, (B.Tech., IT student) joined the Georgia Tech University for Postgraduate studies. Ms. Dhaarna Sethi, (B.Tech., IT student) joined the Carnegie Mellon University for Postgraduate studies.

Tejasva Bhatia, (M.Tech., IT) will join the University of WINNIPEG, Canada for Post Degree Diploma studies. Ms. Ruchika Goel, (B.Tech., IT student) joined the Columbia University, New York, USA for Postgraduate studies.

# **Students' Achievements**

• Mr. Arjun Choudhry, (B.Tech., IT student) received the "Best Student Paper Award" in the FLAIRS 2022 International Conference held in May, 2022 in Florida.

# 4.14 DEPARTMENT OF **MECHANICAL ENGINEERING**



Dr. S. K. Garg HoD

# **ACADEMIC PROGRAMMES**

B.Tech. (M.E.)

Intake: 302 Admitted: 301

B.Tech. (M.E., Continue Education)

Intake: 60 Admitted: 10

B.Tech. (Production & Industrial Engg.) Intake: **77** 

Admitted: 76

B.Tech. (Automotive Engg.)

Intake : **77** Admitted: 76

M.Tech. (Production Engg.)

> Intake: 25+5 Admitted: 16

M.Tech. (Thermal Engg.) Intake: 25+5 Admitted: 23

Ph.D.: 36

# **SALIENT FEATURES**

The department of Mechanical Engineering has seen considerable growth since its inception in 1941. The department of Mechanical engineering also offers Post Graduate courses with specialization in Thermal Engineering, Production Engineering, Computational Design and Renewable Energy Technology. Ph.D. Programs in all fields of Mechanical Engineering are also offered. In addition, the department also offers four years B.Tech. Programme for working Diploma Engineers. The department has developed eco-friendly technology using alternate refrigerants in the RAC lab for re-directing global warming and Ozone depletion.

# **LABORATORIES**

The department possesses modern laboratories equipped with latest experimental set-ups and research facilities for instrumentation, experimental stress analysis, strength of materials, fluid mechanics, Micro and Nano scale Thermo-fluidics, I.C. Engines, automotive engineering, robotics, heat transfer, solar energy, flexible manufacturing system, computational fluid dynamics supported by Software like view-flex, CAD-CAM and engine design. CAD lab has softwares like NX-LAD, NXCAM, AUTOCAD Inventor, Catia, Techomatix, Abacus, Iadino, NX-Nastran, Hyper mesh, hyper works, MDADAMS, Dynaform etc. In addition, microprocessors, micro controllers, PLC, spectrum analyzer and logic analyzer are available for project work.



# **Professors: 21**

- Prof. S. K. Garg (HoD), Ph.D., Areas of Interest: Operations and Supply Chain Management; Quality Engineering and Management; Automation and Industry 4.0.
- **Prof. Sagar Maji,** Ph.D., Areas of Interest: Thermal Engineering, IC Engine.
- **Prof. Samsher,** Ph.D., Areas of Interest: Power Plant, Turbo Machinery.
- Prof. R. S. Mishra, Ph.D., Areas of Interest: Thermal Engineering, Solar Energy.
- **Prof. Naveen Kumar,** Ph.D., Area of Interest: Thermal Engineering.
- Prof. D. S. Nagesh, Ph.D., Areas of Interest: Automation, Robotics, CAD/ CAM, Application of ANN & GA.
- **Prof. Vipin,** Ph.D., Area of Interest: Production Engineering.

- **Prof. Reeta Wattal,** Ph.D., Area of Interest: Production Engineering.
- Prof. Bharat Bhushan Arora, Ph.D., Areas of Interest: Thermal Engineering, Turbo Machine, Refrigeration and Air Conditioning, CFD.
- **Prof. Vikas Rastogi,** Ph.D., Area of Interest: Machine Design.
- Prof. Ashok Kumar Madan, Ph.D., Area of Interest: CAM/Automation.
- Prof. Raj Kumar Singh, Ph.D., Area of Interest: Applied Mechanics.
- **Prof. Amit Pal,** Ph.D., Area of Interest: Automobile Engineering.
- Prof. Ramesh Chander Singh, Ph.D., Area of Interest: Production Engineering.
- Prof. Rajesh Kumar, Ph.D., Areas of Interest: Thermal engineering and Refrigeration.

4. ACADEMIC DEPARTMENTS

- Prof. Qasim Murtaza, Ph.D. Areas of Interest: Production Engg. & Materials, Metal Coating Advance machining.
- Prof. Rajiv Chaudhry, Ph.D., Area of Interest: Mechanical Engineering.
- **Prof. Atul Kumar Agrawal,** Ph.D., Areas of Intrest: Solid Mechanics. Machine Design and Finite Element Method
- **Prof. Vijay Gautam,** Ph.D., Area of Interest: Manufacturing.
- Prof. Akhilesh Arora, Ph.D., Areas of Interest: Thermal Engineering, Refrigeration and Air conditioning.
- Prof. Girish Kumar, Ph.D. Areas of Interest: Industrial Engineering and Reliability Engineer.

# **Associate Professors: 7**

- Mr. Vishva Kamal, M.Tech., Area of Interest: Design Engineering.
- Mr. P. V. Ram Kumar, M.E., Area of Interest: Thermal Engineering.
- **Dr. Pushpendra,** Ph.D., Areas of Intrest: Thermal Engineering, and Renewable Engineering.
- Dr. Mahendra Singh Niranjan, Ph.D., Area of Interest: Production Engineering.
- Dr. Pravin Kumar, Ph.D., Area of Interest: Industrial Management.
- Dr. Anil Kumar, Ph.D., Post Doc., Areas of Interest: Thermal Engineering and Solar Energy Application.
- Dr. Roop Lal, Ph.D., Area of Interest: Machine Design.

# **Assistant Professors: 9**

- **Dr. Manjunath K (on lien),** Ph.D., Area of Interest: Thermal Engineering.
- Dr. Krovvidi Srinivas, M.E., Areas of Interest: Design & Production
- Dr. Sanjay Kumar, M.E., Area of Interest: Machine Design.
- **Dr. Naushad Ahmad Ansari,** Ph.D., Area of Interest: Thermal Engineering.
- Dr. Mohammad Zunaid, Ph.D., Area of Interest: Thermal Engineering.
- Dr. Paras Kumar, Ph.D., Area of Interest: Machine Design.
- Dr. Navriti Gupta, Ph.D. Area of Interest:
- Dr. Raghvendra Gautam, Ph.D. Area of Interest: Thermal Engineering.
- Dr. Sushila Rani, Ph.D. Area of Interest: Design.

# Foreman Instructors: 2

- Mr. P. K. Jain, M.E., Area of Interest: Production Engineering.
- Dr. N. Yuvraj, Ph.D., Area of Interest: Production Engineering.



# **Organization of Webinar/ Conferences and Training Programs**

Visit of All the Laboratories by the Final Year students with active support of all the faculty members and technical staff on 6<sup>th</sup> April, 2022. In this 480 students of final year are divided into 24 groups and shown 24 laboratories of the department. Each group spent 15 minutes in each of the laboratory. After the visit many students worked in the laboratories to learn more.

Conducted five-days workshop on "Mechatronics" by Dr. Sushila during 26<sup>th</sup>-30<sup>th</sup> April, 2022.

Conducted two-days Workshop on "Manufacturing Excellence" by Prof. Vikas Rastogi during 16<sup>th</sup> - 17<sup>th</sup> December, 2021.

Conducted two-weeks Short-Term Training Program (Online) on "Alternative Energy Sources". For Sustainable Development' during 3<sup>rd</sup> - 14<sup>th</sup> January, 2022.

Lecture by Sh. Vijay Loothra, Alumni 1982, on "Stepping into Corporate World- Mind your steps" organised by Dr. Pravin Kumar on 20<sup>th</sup> April, 2022.

Lecture of Prof. Rakesh Mishra, University of Huddershield UK on "Digital Twins of Mechanical Systems" organized by Prof. R. C. Singh on 2<sup>nd</sup> May, 2022.

Two-days workshop on "Material Characterization and Testing" by Prof. V Gautam during 26<sup>th</sup> - 27<sup>th</sup> April, 2022 (Speakers: Prof. D Ravi Kumar, IIT Delhi, Prof. V Gautam, Dr. K Srinivas, Dr. Sanjay Kumar, Dr. Devender Kumar, IIT Roorkee, Dr. Ved Prakash, FORD Motors).

Conducted five-days workshop on "Robotics and AI" by Prof. Vikas Rastogi during 17<sup>th</sup>-21<sup>st</sup> May, 2022.

Conducted five-days Mechatronics workshop on "Implementation of Control & Monitoring the Real Time Embedded" during 4<sup>th</sup>-8<sup>th</sup> April, 2022.

Conducted three-days Skill Development Program with Hands on Practices on "Solar PV System Design using PVYST" software with Cost Economics by Prof. J. P. Kesari during 17<sup>th</sup>-19<sup>th</sup> May, 2022.

Conducted 7<sup>th</sup> International Conference on "Advanced Production and Industrial Engineering" (ICAPIE 2022) organized by Centre for Advanced Production and Industrial Research (CAPIER), DTU, Delhi during 11<sup>th</sup>-12<sup>th</sup> June, 2022.

Conducted 3<sup>rd</sup> International Conference on "Recent Advances in Materials, Manufacturing and Thermal Engineering" (RAMMTE-2022) during 8<sup>th</sup>-9<sup>th</sup> July, 2022.

One Day Workshop on "Prototype / Process Design And Development Prototyping" by Prof. Qasim Murtaza on 26<sup>th</sup> May, 2022.

Entrepreneurship Skills, Attitude and Behavior Management by: Prof. Amit Pal on 26th February, 2022.

4. ACADEMIC DEPARTMENTS



# **Faculty Coordinators for Different Events Organized by the Department**

### Prof. Amit Pal

Coordinator for "Alternative Energy Sources for Sustainable Development", two-weeks Faculty Development Online Programme at department of Mechanical Engineering (DTU) Delhi during 3<sup>rd</sup>-14<sup>th</sup> January, 2022.

Coordinator for "Entrepreneurship Skills: Attitude and Behavior Management" on 26th February, 2022, organized with IIC DTU.

Programme Coordinator in STTP, "Role of Renewable Energy Sources in Indian Energy Security", June, 2022.

#### Prof. Naveen Kumar

Coordinator for 'World Biofuel Day', CASREAE-DTU & IMechE, DTU Chapter organized an informative session on 10th August, 2021 to spread the awareness about biofuels among the students of various schools/colleges.

### CASRAE, IMechE DTU chapter

In association with other esteemed institutions organized an online full-day Workshop on "Beyond Petroleum-The Strategies for Future Energy Needs" on 27th March, 2022.

In association with other premier institutions, organized a webinar on "Simple ways to improve student's classroom performance and experience" on 11th April, 2022.

# Participation in Workshop/ Conference/ Short Term Training Program

- Prof. Naveen Kumar attended an online Workshop and quiz on "Beyond Petroleum-The Strategies for Future Energy Needs" on 27<sup>th</sup> March, 2022.
- Prof. Naveen Kumar attended a full-day workshop, was organized by CASRAE and IMechE-DTU chapter on "Use of Robotics & New Technology" on 29<sup>th</sup> July, 2022.
- Prof. Naveen Kumar participated in workshop on "A Comparative Study for Machine Learning Models in Retail Demand Forecasting ICHCSC-2022" organized by University of Engineering & Management, Jaipur, India, during 27<sup>th</sup> -29<sup>th</sup> April, 2022.
- Prof. Pravin Kumar participated in the International Conference on "RAMMTE" organized by HBTU during 8<sup>th</sup> - 9<sup>th</sup> July, 2022.
- Dr. M. Zunaid, organizing secretary, "3<sup>rd</sup> International Conference on "Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022)" organized by department of Mechanical Engineering, DTU, Delhi, during 8<sup>th</sup> 9<sup>th</sup> July, 2022.
- Dr. M. Zunaid participated in oneday online seminar cum workshop on "Prototype/ Process Design and Development- Prototyping", organized by department of Mechanical Engineering and IIF, DTU, Delhi, recommended by Ministry of Education (GOI) on 26<sup>th</sup> May, 2022.
- Dr. M. Zunaid presented (online) research paper on "Non-Newtonian flow through an artery with three stenosis" in International Conference on Materials Science and Sustainable Manufacturing Technology (ICMSSMT 2022), at

- Coimbatore, Tamil Nadu, India during 20<sup>th</sup> 21<sup>st</sup> May, 2022.
- Dr. M. Zunaid presented (online) research paper on "Performance analysis of inclined micro jet impingement heat sink with porous medium" in the First International Conference on Design and Materials (ICDM) - 2021, organized by DTU, Delhi, India, during 27<sup>th</sup> - 30<sup>th</sup> January, 2022.
- Dr. M. Zunaid presented (online) research paper on "Mixing Enhancement in Vortex Serpentine Micro mixer having Two and Four Non-aligned Inlets" in International Conference on Thermo-Fluids and System Design (ICTFSD 2022), at Birla Institute of Technology, Mesra, Ranchi, India during 22<sup>nd</sup> - 23<sup>rd</sup> March, 2022.
- Dr. M. Zunaid presented (online) research paper on "Effect of Nitrogen and Helium Mixer on the Pre Heat Temperature and Impact Velocity in the Cold Spray Coating Process" in International Conference of Advance Research and Innovation (ICARI 2022), organized by Journal of Advance Research and Innovation on 5<sup>th</sup> March, 2022.
- Dr. M. Zunaid presented (online) research paper on "Design and Analysis of FSAE Full Aerodynamic Package" in International Conference on Materials Science and Sustainable Manufacturing Technology (ICMSSMT 2022), at Coimbatore, Tamil Nadu, India during 20<sup>th</sup> - 21<sup>st</sup> May, 2022.
- Dr. M. Zunaid presented research paper on "Thermal Performance Investigation of Enhanced Receiver Tube for Concentrated Solar Collector" in 3<sup>rd</sup> International Conference on 'Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022), organized by department of Mechanical Engineering, DTU, Delhi, during 8<sup>th</sup> - 9<sup>th</sup> July, 2022.

- Dr. M. Zunaid presented research paper on "Numerical Study and Comparison of Passive Mixing in Helical Micro mixer" in 3<sup>rd</sup> International Conference on 'Recent Advances in Materials. Manufacturing and Thermal Engineering (RAMMTE-2022), organized by department of Mechanical Engineering, DTU, Delhi, during 8th - 9th July, 2022.
- Dr. M. Zunaid virtually presented research paper on "Numerical Analysis of Mixing Performance in Three Dimensional channel" T-Micro in International Conference of Advance Research and Innovation (ICARI 2022), organized by Journal of Advance Research and Innovation on 5th March, 2022.
- Dr. M. Zunaid presented (online) research paper on "CFD Simulation to Enhance the Heat Transmission in Solar Storage Heat Exchanger with PCM Addition" in International Conference of Advance Research and Innovation (ICARI 2022), organized by Journal of Advance Research and Innovation on 5<sup>th</sup> March. 2022.
- Dr. M. Zunaid presented research paper on "Application of Nano Fluid in Jet Impingement Technology Using CFD" in International Conference of Advance Research and Innovation (ICARI 2022), organized by Journal of Advance Research and Innovation on 5<sup>th</sup> March, 2022.
- Dr. M. Zunaid presented research paper on "CFD Analysis of Two Phase Ejector Impacts of C-D Nozzle Geometry" in 3rd International Conference on 'Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022), organized by department of Mechanical Engineering, DTU, Delhi, during 8th - 9th July, 2022.

- Dr. M. Zunaid presented research paper on "Experimental Performance Investigation of Compound Parabolic Cavity Receiver Having Single Absorber Tube" in 3<sup>rd</sup> International Conference on Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022), organized department of Mechanical Engineering, DTU, Delhi, during 8<sup>th</sup> - 9<sup>th</sup> July, 2022.
- Dr. M. Zunaid presented research paper on "Material and Model Simulation of Redesigned Intake Manifold with Dimpled Surface of I.C. Engine" in 3rd International Conference on Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022), organized by department of Mechanical Engineering, DTU, Delhi, during 8th - 9th July, 2022.
- Dr. M. Zunaid attended two-weeks faculty development program (online) on "Alternative Energy Sources for Sustainable Development", organized by department of Mechanical Engineering and Centre for Energy & Environment, DTU, Delhi, during 3<sup>rd</sup> - 14<sup>th</sup> January, 2022.
- Dr. M. Zunaid delivered talk on "CFD and its application in energy research" in two-weeks faculty development program (online) on "Alternative Energy Sources for Sustainable Development", organized by department of Mechanical Engineering and Centre for Energy & Environment, DTU, Delhi, during 3rd - 14th January, 2022.
- Dr. M. Zunaid contributed as Course Coordinator. in two-weeks faculty development program (online) on "Alternative Energy Sources for Sustainable Development", organized by department of Mechanical Engineering and Centre for Energy & Environment, DTU, Delhi, during 3<sup>rd</sup> - 14<sup>th</sup> January, 2022.

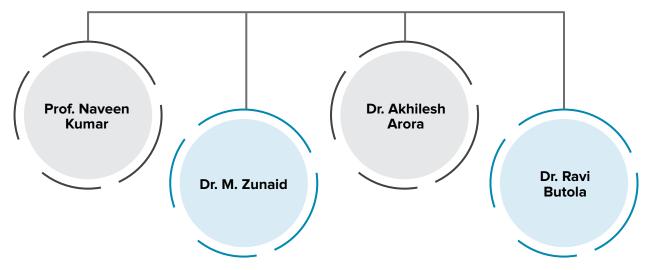
- Dr. M. Zunaid attended one-week AICTE training and learning (ATAL) academy online elementary faculty development program on "Additive Manufacturing: Programming, Operation & Applications", organized by B. R. Ambedkar National Institute of Technology, Jalandhar, during 20<sup>th</sup> 24<sup>th</sup> September, 2021.
- Dr. M. Zunaid attended three-days faculty development program on "NBA Accreditation Procedures", organized by NITTTR Chennai and Ministry of Education, Government of India at DTU, Delhi, during 9<sup>th</sup> - 11<sup>th</sup> May, 2022.
- Dr. M. Zunaid attended one-week AICTE training and learning (ATAL) academy online elementary faculty development program on "Advances in Industrial and Systems Engineering" organized by B. R. Ambedkar National Institute of Technology, Jalandhar, during 13<sup>th</sup> 17<sup>th</sup> December, 2021.
- Dr. M. Zunaid attended one-week AICTE training and learning (ATAL) academy online elementary faculty development program on "3D Printing and Design" organized by Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Sonipat, Haryana, during 22<sup>nd</sup> 26<sup>th</sup> November, 2021.
- Dr. M. Zunaid attended one-week online faculty development program on "Research Methodology and Introduction to Modeling Techniques", organized by Delhi School of Management, DTU, Delhi, during 18<sup>th</sup> - 23<sup>rd</sup> July, 2022.
- Dr. M. Zunaid attended one-week faculty development program on "Robotics and Artificial Intelligence", organized by department of Mechanical, Production & Industrial and Automobile Engineering, DTU, Delhi, during 17<sup>th</sup> - 21<sup>st</sup> May, 2022.
- Dr. Naushad Ansari contributed as Course Coordinator in two-weeks online faculty development program

- on "Alternative Energy Sources for Sustainable Development", organized by department of Mechanical Engineering and Centre for Energy & Environment, DTU, Delhi, during 3<sup>rd</sup> 14<sup>th</sup> January, 2022.
- Dr. Naushad Ansari, joint organizing secretary in 3<sup>rd</sup> International Conference on "Recent Advances in Materials, Manufacturing and Thermal Engineering (RAMMTE-2022)", organized by department of Mechanical Engineering, DTU, Delhi, during 8<sup>th</sup> - 9<sup>th</sup> July, 2022.
- Dr. Naushad Ansari attended two-weeks online faculty development program on "Alternative Energy Sources for Sustainable Development", organized by department of Mechanical Engineering and Centre for Energy & Environment, DTU, Delhi, during 3<sup>rd</sup> - 14<sup>th</sup> January, 2022.
- Dr. Naushad Ansari attended a oneweek faculty development program on "Research Methodology and Introduction to Modeling Techniques" during 18<sup>th</sup> -23<sup>rd</sup> July, 2022.
- Dr. Naushad Ansari attended AICTE sponsored ATAL FDP on "Clean Energy Manufacturing: Transformation for sustainable development" during 4<sup>th</sup> -8<sup>th</sup> October, 2021.
- Dr. K. Srinivas attended two-days workshop on "Material Characterization and Testing", organized by the department of Mechanical Engineering, DTU, during 26<sup>th</sup> - 27<sup>th</sup> April, 2022.
- Dr. K. Srinivas delivered an expert lecture on "Microstructural Characterization of steels & Cast Irons and Testing" at two-days workshop on "Material Characterization and Testing" organized by the department of Mechanical Engineering during 26<sup>th</sup> 27<sup>th</sup> April, 2022.

- Dr. K. Srinivas contributed as Co-Coordinator at two-days workshop "Material Characterization Testing" organized by the department of Mechanical Engineering, during 26th-27th April, 2022.
- Dr. Roop Lal presented (online) paper on "Fabricating and Characterizing Aluminum based metal matrix composite using Sugarcane bagasse ash" in International Conference of Advance Research and Innovation (ICARI - 2022, organized by International Journal of Advance Research and Innovation, on 5<sup>th</sup> March, 2022.
- Dr. K. Srinivas presented (online) paper on "Designing a Robotics Arm for Grasp Generation using Stereoscopic Setup and ROS" in International Conference of Advance Research and Innovation (ICARI - 2022), organized by International Journal of Advance Research and Innovation, on 5<sup>th</sup> March, 2022.
- Dr. K. Srinivas presented (online) paper on "Designing of full Sub tractor using CMOS Technology (TANNER EDA)" in International Conference of Advance

- Research and Innovation (ICARI 2022) organized by International Journal of Advance Research and Innovation, on 5<sup>th</sup> March, 2022.
- Dr. Ravi Butola attended one-week short term training program on "Robotics and Artificial Intelligence (RAI-2022)", organized by department of Mechanical Engineering, DTU, 17<sup>th</sup> - 21<sup>st</sup> May, 2022.
- Dr. Ravi Butola attended oneweek Mechatronic workshop on "Implementation Control of and Monitoring the Real Time Embedded Device" organized by department of Mechanical Engineering DTU, Delhi during 4th - 8th April, 2022.
- Dr. Ravi Butola attended one-week Faculty Development Program (e-FDP) on "Modern Trends in Manufacturing and Thermal Sciences (MTMTS-2022)", organized by department of Mechanical Engineering, NIT Delhi, India during 5th -10<sup>th</sup> April, 2022.
- Dr. Ravi Butola attended an AICTE sponsored ATAL FDP (Online) "Clean Energy Manufacturing: Transformation for sustainable development" during 4th - 8th October, 2021.

# Research Excellence Award on 3rd March, 2022 at DTU, Delhi



# **Important Professional Affiliations:**

## Dr. Anil Kumar

- Fellow Membership, The Institution of Engineers (India) (vide no. F-1268879, date of election 24<sup>th</sup> August, 2020).
- Chartered Engineer, The Institution of Engineers (India) (vide no. F-1268879, date of election 3<sup>rd</sup> September, 2020).
- Fellow Membership, International Scientific Research Organization for Science, Engineering and Technology (ISROSET-FM-1092).

### Prof. R. S. Mishra

- Life Fellow Member of the Institution of Engineers (India). Calcutta Geological Society of India, Bangalore Indian Institution of Environmental Engineers, Delhi Indian Water Resources Society, Roorkee Indian Institute of Disaster management Delhi National foundation of Indian Engineers, Delhi.
- · Life member of :-
  - Solar Energy Society of India, Delhi.
  - Bio Energy Society of India.
  - Indian Society of Bio-Technology, & Bio Chemistry, Delhi.
  - Indian Society of Soil Sciences, IARI, Delhi.
  - Indian Institute of Chemical Engineers, Calcutta.
  - Indian Society of Water Management, Delhi.
  - Indian Society of Agricultural Engineers Delhi.
  - Indian Society of Soil Conservation.
  - Indian Society of Information technology and Statics.
  - Systems Society of India.
  - Association of Food Scientists & Technologists (India) Bangalore.
  - Association of Soil and water Conservationist (India) Dehradun.
  - Indian Society for Technical Education (ISTE).

- Indian Society of Mechanical Engineers Delhi.
- Indian Society of Dry Land agriculture Hyderabad.

# Prof. S. K. Garg

- Life Fellow the Indian Institution of Industrial Engineering.
- Life Member: Indian Society of Technical Education; Global Institute of Flexible Technology.

### **Prof. Naveen Kumar**

- Fellow of Institution of Mechanical Engineers, UK.
- Fellow of Institution of Engineers, India.
- Charted Engineer, Engineering Council, UK.

# Prof. Vipin

 Life Member: Indian Society of Mechanical Engineers, Indian Society of Technical Education ISTE.

### Dr. Akhilesh Arora

 Life Member: Indian Society of Technical Education, Member of ISHRAE, ASHRAE Member of American Society of Heating, Refrigerating and Air Conditioning Engineers, Indian Society of Heating, Refrigerating and Air- Conditioning Engineers ISHRAE.

## **Prof. Amit Pal**

- Life Member Indian Society of Mechanical Engineers LM-1047.
- Life Member Indian Society of Technical Education LM86407.
- Life Member Solar Energy Society of India LM/2045/2014.
- Life Member Ultrasonic Society of India LM-257.
- As expert member for DTC CNG Bus procurement committee.
- As expert member for DTC Electric Bus procurement committee.
- As expert member for Govt. of Delhi, Bus fire incidents investigation committee.

### Dr. Roop Lal

 Life member of The Institution of Engineers, Calcutta.

#### **Dr. Paras Kumar**

- Life Member Indian Society for Technical Education (LMISTE).
- · Life Member of Tribology Society of India
- Life Member of International Association of Engineers (IAENG).

# Prof. Vikas Rastogi

- · Member SAE in Vehicle Design.
- SAE (Membership) SAE Annual membership is 7130310477.

# Dr. K Manjunath

- Life Member of Indian Society for Technical Education (ISTE), membership no. LM 43996.
- Fellow of Institution of Engineers India (FIE), membership no. F-1240015.

## Dr. Pravin

- Life Membership of Institution of Engineers.
- Life Associate Member of IIIE, India.
- · Life member of System Society of India.
- Life member of Society of Operations Management, India.

### Prof. Rajesh Kumar

 SESI (Membership): SESI Membership Number is LM/2037/2013.

# Dr. Pushpendra Singh

• ISCA (Life Member), Senior Member (ISME), FSIESRP (Life Member).

#### Dr. Sushila Rani

• Life Time Membership of ISTE, Indian Society of Technical Education.

### Dr. M. Zunaid

- Life member of Indian Society of heat and mass transfer (ISHMT), membership no. LM-722.
- Life member of 'Indian Society for Technical Education (ISTE), membership no. LM 82172.

- Life Member of 'Solar Energy Society of India (SESI)', membership no. LM/2046/2014.
- Member of 'Indian Society of Heating Refrigeration & Air Conditioning Engineers (ISHRAE)', membership no. 21819.
- Life member of 'The Institution of Engineers India (IEI)', membership no. M-1533457.
- Life member of 'Society for Fusion of Science and Technology (SFST)', life membership no. LM/ 2017/ 106.
- Life member of Society for 'International Association of Engineers (IAENG)', membership no. 248647.
- Life Member of 'Indian Society of Mechanical Engineers (ISME)', membership no. L-1223.

### Prof. V. Gautam

 Member of Society of Automotive Engineers India Chapter M No.:7160311104.

### **Prof. Reeta Wattal**

 Life member, ISME, Life member, ISTE, Life member, IIW

### Dr. Naushad Ansari

- Life member of Indian Society for Technical Education (ISTE), (LM 80889).
- Life member of Solar Energy Society of India (SESI), (LM/2044/2014).
- Member of Indian Society of heating Refrigeration & Air-conditioning Engineers (ISHRAE), (21818).
- Member of International Association of Engineers (IAENG), 266658.

# Dr. K. Srinivas

- Member of Institution of Engineers (India).
- Member of Indian Society for Technical Education.
- Member of Powder Metallurgy Association of India.

# 4.15 DEPARTMENT OF SOFTWARE ENGINEERING



**Prof. Ruchika Malhotra** HoD

# ACADEMIC PROGRAMMES

B.Tech. (Software Engineering)

Intake : **182** Admitted : **181** 

M.Tech. (Software Engineering)

Intake: 25+5 Admitted: 19

M.Tech.
(Data Science)

Intake: 30+5 Admitted: 11

Ph.D.
Software Engineering : 1
Computer Science: 6

# **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. The department of Software Engineering 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.

### **ACHIEVEMENTS** -

Journal Publications

07

Conference Publications

19

4. ACADEMIC DEPARTMENTS

# **Professors: 1**

Prof. Ruchika Malhotra (HoD), Ph.D., Post Doc (Indiana University Purdue University, USA), Areas of Interest: Machine Learning and Predictive Modeling, Software Testing and Quality, **Empirical** Software Engineering, Search-based Software Engineering.

# **Assistant Professors: 7**

- Dr. Abhilasha Sharma, B.Tech., M.Tech., Ph.D., Areas of Interest: Software Engineering, Software Testing, DBMS, Web Technology, Web Security.
- Dr. Divyashikha Sethia, B.Tech., M.Tech., Ph.D., Areas of Interest: Distributed Systems, Computer Networks, Algorithms, Mobile Computing, Health, Cryptography.

- Mr. Sanjay Patidar, B.E., M.E., (Pursuing Ph.D.), Areas of Interest: security, Stream Data mining, Machine Learning, IOT Smart Application, Data Science, and Theory of Computation.
- Dr. Sonika Dahiya, B.E., M.Tech., Ph.D., Areas of Interest: Algorithms and Data Mining, Databases, Data Structures, Theory of Computation, Data Science, Deep Learning.
- Mr. Rahul, B.Tech., M.Tech., Pursuing Ph.D., Areas of Interest: Database, Data Mining, Machine Learning, and Social Networks.
- Ms. Shweta Meena, B.Tech. (IT), M.Tech. (SWE), Pursuing Ph.D., Areas of Interest: Software Engineering, Software Testing, Software Quality, and Metrics, Empirical Software Engineering.
- Ms. Priya Singh, B.Tech., M.Tech., Ph.D. (Pursuing), Areas of Interest: Deep Learning, Machine Learning, Predictive Modelling, Software Engineering, Algorithms and Programming, Cloud Native, 5G Core Network.

# Achievements of the Department: (MoU, International Seminar, or any **Achievement by Faculty Members)**

Samsung Lab development in process for 3 years starting in 2019

Efkon India Private Limited signed an MoU in 2020 for 4 years to set up an Intelligent Transportation System facility at DTU, Delhi for Research and Innovation

## **Award Received**

## Prof. Ruchika Malhotra

Commendable Research Award by DTU on 3<sup>rd</sup> March, 2022

### Dr. Abhilasha Sharma

Commendable Research Award by DTU on 3<sup>rd</sup> March, 2022

### Mr. Sanjay Patidar

Commendable Research Award by DTU on 3<sup>rd</sup> March, 2022

# Faculties Provided with Financial Support to Attend Conferences / Seminars / Symposia / Workshops / Short Term Course / Guest Lecture / GIAN/TEQIP etc.

 Mr. Sanjay Patidar received ₹ 30260 for attending two weeks of Industrial Training on "Big Data Cloud Programming" from Sveltose Technology Private Limited, Indore, MP during 16<sup>th</sup> June, - 2<sup>nd</sup> July, 2022.

# Details of Faculties Attending PDPs, Orientation Programme, Refresher Course, Short Term Course, FDPs

Prof. Ruchika Malhotra, Dr. Abhilasha Sharma, Dr. Divyashikha Sethia, Dr. Sonika Dahiya, Mr. Sanjay Patidar, Mr. Rahul, Ms. Priya Singh, Ms. Shweta Meena, Dr. Geetanjali Garg, Mr. Ram Murti Rawat

# Workshop on "Intellectual Property Rights (IPRs) & IP Management for Start-Ups"

Department of Software Engineering, DTU, on 28<sup>th</sup> April, 2022

# Workshop on "Design Thinking, Critical Thinking, and Innovation Design"

Department of Software Engineering and Industrial Research & Development, DTU, during  $13^{th}$  -  $4^{th}$  January, 2022

# "Managing Women Health & Mental Well-being"

Industrial Research & Development and Department of Software Engineering, DTU, on  $8^{\text{th}}$  March, 2022

### Dr. Abhilasha Sharma

# Industrial Training **Program**

Edukemy, Noida, Uttar Pradesh during 3<sup>rd</sup> - 17<sup>th</sup> June, 2022

# Dr. Sonika Dahiya

Industrial Training by working with the 'Software Development Team'

eSamudaay during 18<sup>th</sup> - 29<sup>th</sup> July, 2022

# Mr. Sanjay Patidar

# Industrial Training on "Big Data Cloud Programming"

Sveltose Technology Private Limited, Indore, MP during 16<sup>th</sup> June, -2<sup>nd</sup> July, 2022

# Regional meet, IIC, MoE's Innovation Cell,

Chandigarh University, Chandigarh on 26<sup>th</sup> July, 2022

# Procurement procedure Training on GFR, Procurement Manual, etc.

Directorate of Training and Union service territory, Govt. of NCT of Delhi at DTTE on 28<sup>th</sup> October, 2021

# Visit of Faculty to Other Institutions for Taking Expert Lectures/Other Academic Work

 Dr. Sonika Dahiya delivered an Expert Lecture on "Fuzzy Clustering and its Application" at Computer Science Engineering department, Bennett University, Uttar Pradesh on 22<sup>nd</sup> November, 2021.

Grants for Research Projects Sponsored by Non-government Sources such as Industry, Corporate Houses, International Bodies, Endowments, and Chairs in the Institution during the Current Year (INR in Lacs)

- Dr. Ruchika Malhotra received ₹ 4.5 Lacs from DTU, Delhi in year 2019 for a project with a duration of 2 years. She also received non-government funding of ₹ 32 Lacs for a duration of 4 years in the year 2020.
- Dr. Rajni Jindal and Dr. Divyashkha Sethia were provided with Lab infrastructure from Samsung Research India for a project with a duration of 3 years in the year 2019.

# Detail of Student Progression to Higher Education (Previous Graduating Batch) (the Current Year)

- Arushi Gupta (2K16/CO/341) graduated with B.Tech. (Software Engineering), joined University College London (M.Sc. Computer Science) in 2022.
- Pavana Gupta (2K15/SE/47) graduated with B.Tech. (Software Engineering), joined IIM Kozhikode (MBA) in 2021.
- Aditya Miglani (2K17/SE/011) graduated with B.Tech. (Software Engineering), joined IIM Bangalore (MBA) in 2021.
- Rajat Gupta (2K15/SE/52) graduated with B.Tech. (Software Engineering), joined IIM Bangalore (MBA) in 2021.
- Arushi Gupta (2K16/SE/017) graduated with B.Tech. (Software Engineering), joined King's College London (Advanced Computing MSc (Full-time)) in 2021.
- Vittal Vikranth (2K15/SE/091) graduated with B.Tech. (Software Engineering), joined the University of South Florida (Computer Science and Engineering) in 2021.

# 4.16 UNIVERSITY SCHOOL OF MANAGEMENT AND ENTREPRENEURSHIP



**Prof. Amit Mookerjee**HoD

# **ACADEMIC PROGRAMMES**

B.A. (H) (Economics)
Intake : 182+18 (FN)
Admitted : 162

BBA
Intake : 182+18 (FN)
Admitted : 167

MBA
Intake: 120
Admitted: 80

MBA - Business Analytics
Intake : 40
Admitted : 24

MBA - Family Business & Entrepreneurship Intake : 40
Admitted : 15

Admitted: 14

MBA - Innovation, Entrepreneurship and Venture Development Intake : 40

7 Ph.D. : 8

# LABORATORIES

The department currently has two computer laboratories equipped with the latest version of different software platforms and systems.

There has been active involvement of students and faculty in the various professional activities student and 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. all have led to an all-round exposure of students USME to the rapidly changing industrial economic and scenario.

### **ACHIEVEMENTS**

• Book Chapters Authored: 9

Books Published:

• Research Publication: 52

• Conference Presentations: 9

4. ACADEMIC DEPARTMENTS

1

# SALIENT FEATURES

The East Delhi Campus of the DTU, was inaugurated in August, 2017, by the Hon. Chief Minister of Delhi Shri Arvind Kejriwal, and the Hon. Deputy Chief Minister of Delhi, Shri Manish Sisodia, in the August, presence of Hon. Vice Chancellor, Prof. Yogesh Singh, Hon. PVC, Prof. Anu Singh Lather and Prof. S. K. Garg, and a gathering of esteemed members of the Government of Delhi, respected academics and others. The East Delhi Campus of DTU is functional since 2017-18 academic session, offering both under-graduate and postgraduate programs, and is situated at Vivek Vihar Phase II, New Delhi.

In alignment with the vision and mission of the DTU, this campus endeavors to provide quality education, research and innovation in the emerging areas of management relevant to industry and society. The University School of Management and Entrepreneurship was initiated with the view to fulfill this mission and the able leadership of the PVC II, Prof. Anu Singh Lather, as the founding head of East Delhi Campus, DTU has helped 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 in the world of technology and best practices in higher education. The prime focus of the USME was on the introduction of new UG and PG programs in the emerging areas of management such as business analytics, entrepreneurship and family business, public policy and financial Markets etc. along with traditional undergraduate and postgraduate management programs. It aims to foster the educational ethos in its programs, of employability through industry relevant programs, on focused domains of knowledge creation and innovation, through research and development. It looks to harness and leverage Techno - entrepreneurship and knowledge enterprise development through the centers of Entrepreneurship Development and Organizational Development.

From the 2017-18 academic year, 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 the academic year 2018-19. Two more programs M.B.A. Family Business and Entrepreneurship and M.B.A-Innovation, Entrepreneurship and Venture Development (IEV) 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 offers Ph.D. programs in Management, Economics and IEV. It is offering the MA Economics and BBA-IEV programs from current year onwards - 2022-23.

The school has designed programs to develop the capability amongst students for managing complex situations and relationships. Amongst the various skills of management courses, some of them focus on strengthening management principles, presentation, problem solving, team building, decision-making and marketing. Hence, management programs running in the school will help the country in producing talented and skilled workforce.

There has been active involvement of students and faculty in the 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, all have led to an all-round exposure of students at USME to the rapidly changing economic and industrial scenario.

New Academic Programmes Approved during 2021-22 for Launch in 2022-23

S. No.	Name of Academic Programme	Intake	Duration	UG/PG
1	M.A. Economics	60	2 Years	PG
2	BBA-Innovation, Entrepreneurship and Venture Development	30	3 Years: BBA-IEV 4Years: BBA (Honours) IEV 5 Years: Integrated MBA-IEV	UG And Integrated UG/PG



# **Professors: 1**

• **Prof. Amit Mookerjee (HoD**), MBA, Ph.D., Area of Interest: Marketing.

# **Adjunct Professor: 1**

 Prof. K. V. Bhanumurthy, Ph.D., Area of Interest: Economics

# **Associate Professors: 1**

• **Dr. Nidhi Maheshwari,** MBA, LLB, Ph.D., Area of Interest: HR Leadership.

# **Assistant Professors: 15**

- **Dr. Jagvinder Singh,** M.Sc. Ph.D, Areas of Interest: Quantitative Techniques, Operations Research, Statistics
- Ms. Harleen Kaur, MBA, Areas of Interest: Marketing Management, Consumer Psychology, Brand Management.

- Mr. Anurag Chaturvedi, MBA, Areas of Interest: Finance, FRM
- Ms. Priya Malhotra, MBA, Areas of Interest: Financial Markets Investment Management Financial Management.
- Ms. Varsha Sehgal, MBA, Areas of Interest: Strategy, Business Analytics, Information Technology
- **Ms. Pallavi Sethi,** M.Phil, Areas of Interest: Accounting and Finance.
- **Dr. Naval Garg,** Ph.D., Area of Interest: Workplace Spirituality.
- Dr. Deepti Aggrawal, Ph.D., Areas of Interest: Optimization Techniques, Operations Research.
- Dr. Gaganmeet Kaur Awal, Ph.D., Areas of Interest: Machine Learning and Data Mining.
- Dr. Kusum Lata, Ph.D., Areas of Interest: Machine Learning, Data Mining, Software.

4. ACADEMIC DEPARTMENTS

- Ms. Aakanksha Kaushik, M.Phil. (Economics), Areas of Interest: Public Finance and Microeconomics.
- Mr. Virender Kumar, M.Phil., Areas of Interest: Macroeconomics and Time Series Econometrics.
- Mr. Puneet Arora, MA., Areas of Interest: Development Economics, Mathematical Methods for Economics and International Trade.
- **Dr. Rajesh Sharma,** Ph.D., Area of Interest: Health Economics.
- **Dr. Ratnam Mishra,** Ph.D., Areas of Interest: Micro Economics, Economics of Education, Indian Economy.

# **Visiting Faculty: 1**

Prof. Manoj Kumar Sharma, Ph.D.,
 Areas of Interest: Innovation,
 Entrepreneurship, Venture
 Development and Strategic
 Management.





# Details of Faculties Attending PDPs, Orientation Programme, Refresher Course, Short Term Course, FDPs

- Dr. Rajesh Sharma attended a thirty-days workshop on "Academic Writing and Communication Skills, Research Methodology, Reference Management, and Academic Publishing" organized by National Institute of Physical Medicine and Rehabilitation during 23<sup>rd</sup> November 31<sup>st</sup> December, 2022, completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1<sup>st</sup> April 10<sup>th</sup> July, 2022 attended a three-days FDP on "NBA Accreditation Procedures" organized by DTU, Delhi held during 6<sup>th</sup> 8<sup>th</sup> June, 2022.
- Dr. Naval Garg attended a thirty-days workshop on "Academic Writing and Communication Skills, Research Methodology, Reference Management, Academic Publishing" organized by National Institute of Physical Medicine and Rehabilitation during 23<sup>rd</sup> November 31<sup>st</sup> December 2022, and completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1<sup>st</sup> April, 10<sup>th</sup> July, 2022.
- Dr. Manoj Kumar Sharma attended workshop on "Start-up: Legal & Ethical Aspects", organized by USME, DTU, Delhi, recommended by the Institute Innovation Council (IIC) of DTU. Delhi and the mandate of Innovation cell, Ministry of Education (MoE) GOI on 22<sup>nd</sup> March, 2022. He further attended various workshops titled Lean Start-up and Minimum Viable product/Business, Business Model Canvas, Structuring Financial Products for Venture Capital Investment organized by USME, DTU, Delhi recommended by the Institute Innovation Council (IIC) of DTU, Delhi and the mandate of Innovation cell, Ministry of Education (MoE) GOI at various dates.

- Dr. Deepti Aggrawal attended threedavs FDP on NBA Accreditation Procedures organized by Delhi Technological University held during 6th - 8th June, 2022, a five-days FDP on "Analytics for Marketing and Retail", organized by BIT, Pilani during 13th - 17th December, 2021 and a five-days FDP on "Predictive Modelling using data science techniques", organized by IIT Guwahati during 6th - 10th September, 2021, completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1st April - 10th July, 2022.
- Ms. Priya Malhotra attended a six-days FDP on "Financial Time Series Modeling in R", organized by IIT Kanpur during 15<sup>th</sup> - 20<sup>th</sup> February, 2021, a five-days FDP on FDP on "Advanced Time Series Analysis", organized by AMITY Business School during 21<sup>st</sup> - 25<sup>th</sup> June, 2021.
- Dr. Kusum Lata attended a five-days **FDP** on "Research Methodology Techniques", and Optimization Polytechnic, organized by Govt. Nashik during 13th - 17th December, 2021, a five-days FDP on "Software **Engineering Paradigms of Computational** Intelligence", organized by NSUT, Delhi during 25th - 29th October, 2021, a two-weeks Refresher Programme on "Managing online classes and cocreating MOOCS 15.0", organized by TLC, Ramanujan College during 6th - 20th June, 2022 and completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1st April - 10th July, 2022.
- Ms. Harleen Kaur completed eight MOOC courses conducted by National

Initiative for Technical Teachers Training during 1st April - 10th July, 2022, a twoweeks refresher course on "Interdisciplinary course Research on Methodology", organized by TLC, Ramanujan College during 20th Feburary - 6th March, 2022.

- Dr. Gaganmeet Kaur Awal completed eight MOOC courses conducted by National Initiative for Technical Teachers Training from 1<sup>st</sup> April - 10<sup>th</sup> July, 2022 and attended a three-days FDP on "NBA Accreditation Procedures", organized by DTU, Delhi during 6th - 8th June, 2022; attended one-week faculty development program on "Research Methodology and Introduction to Modelling Techniques", organized by DSM, DTU, Delhi during 18<sup>th</sup>-23<sup>rd</sup> July, 2022; five-days information literacy workshop on "e-resources: A gateway for research" during 6th -10th September, 2021; one-day online workshop on "Business Model Canvas", on 25th September, 2021.
- · Dr. Ratnam Mishra completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1st April - 10th July, 2022.
- Ms. Varsha Sehgal completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1st April - 10th July, 2022.
- Mr. Puneet Arora completed eight MOOC courses conducted by National Initiative for Technical Teachers Training during 1st April - 10th July, 2022.
- Ms. Aakanksha Kaushik attended a three-days FDP on "NBA Accreditation Procedures", organized bv Technological University during 6<sup>th</sup>-8<sup>th</sup> June, 2022 and a two-weeks refresher programme on "Inter-disciplinary course

- on Research Methodology", organized by TLC, Ramanujan College from 20th February - 6<sup>th</sup> March, 2022.
- Dr. Nidhi Maheshwari attended a three-days FDP on "NBA Accreditation Procedures", organized by DTU, Delhi during 6th - 8th June, 2022.
- Ms. Palavi Sethi completed seven MOOC courses conducted by National Initiative for Technical Teachers Training during 1st April, - 10th July, 2022.

# **Seminar/Workshops Organized**

- Dr. Aakanksha Kaushik Organized a one-day workshop on "How Policy Interventions by the Government Can Help Fight Covid-19 and Strengthen the Economy" on 26th June, 2021.
- Dr. Deepti Aggrawal and Dr. Kusum Lata organized a one-day workshop on "Data Analytics for Managers" on 20th May, 2021.
- Dr. Ratnam Mishra organized 5 one -day workshops at USME, DTU, Delhi, recommended by the Institute Innovation Council (IIC) of DTU, Delhi and the mandate of Innovation cell, Ministry of Education (MoE) GOI on topics -
  - 1. Lean Start-up and Minimum Viable product/Business on 28th June, 2021.
  - 2. Business Model Canvas on 25th September, 2021.
  - 3. Problem Solving and Ideation on 30th November, 2021.
  - 4. Structuring Financial Products for Venture Capital Investment 24<sup>th</sup> January, 2022.
  - 5. Hybrid Universities: The Future of Higher Education in India on 28th April, 2022.

- Ms. Varsha Sehgal was the resource person for the one-day workshop organized at USME, DTU, Delhi recommended by the Institute Innovation Council (IIC) of DTU, Delhi and the mandate of Innovation cell, Ministry of Education (MoE) GOI on "Business Model Canvas", on 25<sup>th</sup> September,
- 2021 and "Structuring Financial Products for Venture Capital Investment", on 24<sup>th</sup> January, 2022.
- Dr. Gaganmeet Kaur Awal organized a one-day workshop on "Research and Publication Ethics" in association with USME DTU, Delhi on 28<sup>th</sup> January, 2022.

# **Faculty Participation in Seminars/Conferences and Symposia**

### Dr. Kusum Lata

"2<sup>nd</sup> International Conference on Information Technology (InCITe 2022" on the theme: Computational Intelligence.

# Dr Deepti Aggrawal

"1st International Conference on Mathematical Engineering and Management Sciences".



### Dr. Manoj Kumar Sharma

"21st Global Conference on Flexible Systems Management, GLOGIFT 21" Theme of the Conference was "Flexibility, Resilience & Sustainability" in 2022.

#### Dr. Ratnam Mishra

"International Conference 2022 on Neoteric Tendencies in World Economy, Education & Employment", organized by VIPS in collaboration with Faculta de Contaduria Publica y Administration.

# Ms. Priya Malhotra

"3rd RMC Sustainable Development Goals in the post-pandemic world", organized by Rajagiri Business School jointly with Fiji National University, Third SEBI-NISM Research Conference on "Investing in Recovery: Challenges and Opportunities for Indian Securities Markets" and India Finance Conference 2021 jointly organized by IIMA, B and C.



### Ms. Anurag Chaturvedi

"1st International Conference on Mathematical Engineering and Management Sciences".



#### Ms. Harleen Kaur

"1st International Conference on Mathematical Engineering and Management Sciences".



# **Expert Lecturers Delivered by Faculties**

#### Dr. Ratnam Mishra

person Resource for two-days workshops organized by GBSSS, Shahbad, Daulatpur, Delhi on "Entrepreneurial Mindset Development" in 4<sup>th</sup> Youth April, 2022 "Prospects and Entrepreneurship Development for Young Minds" on 5th April, 2022.

## Mr. S. M. Rounaque Mustafa

Resource person for one-day workshop in association with DTU-IIF on "Angel & VC investment for early-stage startups" and one-day workshop in association with STPI (Software Technology Park of India, Dehradun) on "Incubation support for early-stage startups".

### Prof. K. V. Bhanumurthy

Resource person in association 2<sup>nd</sup> Online two-weeks Refresher Course in Commerce & Management Studies, organized by the UGC-Human Resource Development Centre, Jamia Millia Islamia on 11<sup>th</sup> January, 2022.

Resource person in association 2<sup>nd</sup> Online two-weeks Refresher Course in Commerce & Management Studies, organized by the UGC-Human Resource Development Centre, Jamia Millia Islamia on 21<sup>st</sup> January, 2021.

Resource person in association Mahatma Hansraj Faculty Development Centre, Hansraj College, one-week FDP on "Basics of Research" on 19<sup>th</sup> June, 2022.

Resource person in association Mahatma Hansraj Faculty Development Centre, Hansraj College, one-week FDP on "Basics of Research" on 26<sup>th</sup> June, 2022.

# **Faculty Awards and Recognitions**

- Dr. Rajesh Sharma received Commendable Research Award by DTU, Delhi Guest Editor Frontiers in Public Health, Associate Editor BMC Public Health, and Invited in Editorial Team Health care science (Wiley).
- Dr. Naval Garg received Commendable Research Award by DTU, Delhi, Guest Editor Frontiers in Psychology, Invited as Technical Session Chair & Resource Person at International Conference, organized by Vivekanand School of Economics, Vivekanand Institute of Professional Studies during 25<sup>th</sup> - 26<sup>th</sup> March, 2022 and Invited as Panel to Judge Business Blasters Programme of Delhi Government.
- Dr. Kusum Lata received Commendable Research Award by Delhi Technological University, on 3<sup>rd</sup> March, 2022.
- Ms. Priya Malhotra received Cash Award for Paper presented in Second Capital Markets Conference, jointly organized by SEBI and NISM.
- Dr. Deepti Aggrawal chaired a technical session at International Conference on Mathematical Engineering and Management Sciences, organized by DQM Research Center, Serbia during 25<sup>th</sup> - 26<sup>th</sup> June, 2022.
- Dr. Manoj Kumar Sharma Invited by American Embassy Delhi (USA Govt.) for "QUAD Fellowship" selection/ discussion meet, Invited/Appointed by IIT Delhi (Dept. of Management Studies) as External Expert Member of Student

Research Committee (SRC) and Invited as JURY to Judge/Select Startups in the Final Pitching round in Business Blasters Programme of Government of NCT of Delhi (GNCTD).

 Prof. Amit Mookerjee received Regional Editor, Marketing, JIBR, Jury Member, All India Management Association (AIMA) National Case Competition; BM Munjal (Hero Group) Corporate Awards, others, Board of Studies, AIMA; AUD, APJ, IMT (Marketing), MDI, FinX, others; BoG, ASM; Expert Panel Entrepreneurship BML Munjal and Expert on Faculty Selection Panel, IIM A, BG, J, Si, Sh, etc., IIFT and others.

# **Students' Achievements and Recognition**

"Innovative Scripts Private Limited" is a DPIIT- Startup India recognized start-up, working on the cutting-edge technologies such as Blockchain, Artificial Intelligence, AR, VR and Mixed Reality. Incubated at DTU-IIF under the MBA-IEV program of USME, DTU. It was recognized as "Top 75 Emerging Start-Ups in India" by the AICTE and Ministry of Education, Government of India.

# Saumya Gupta (BBA 2<sup>nd</sup> Year)

Secured 1<sup>st</sup> position in rap battle organized by NSUT in March, 2022.

Secured 2<sup>nd</sup> position in Indoor Mood Indigo organized by IIT Bombay in July, 2021.

Qualified for the finals of Mood Indigo Talent Hunt. Mood Indigo, Asia's largest cultural fest organized by IIT Bombay in December, 2021.

## Mukul Gupta (BBA 2<sup>nd</sup> Year)

Secured 2<sup>nd</sup>
position in
Instrumental solo
organized by
Maharaja Agarsen
College in October,
2021.

# Shubham Prajapati and Nayan Trehan

Founding business coaches to school students for the business blaster programme at the School of Excellence (SoE), Khichripur, Delhi.



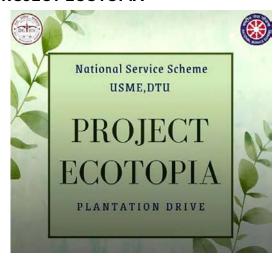
4. ACADEMIC DEPARTMENTS

# **New Programs Sanctioned**

- (Innovation, Entrepreneurship BBA and Venture Development): The aim of Innovation, Entrepreneurship and Venture Development Program (IEV) is to provide these students a theoretical and technical framework to run their businesses more professionally and systematically. The recent initiative of the Delhi Government in the area entrepreneurship development includes the Entrepreneurship Mindset Curriculum in schools and the Business Blasters competition. This competition is aimed at enhancing the mindset, skills and opportunities for school students in Delhi in the start-up arena. As part of this program, there has been a directive from DTTE, to State Universities of Delhi to incorporate in their Academic programs, the provision of sufficient number of seats meant specifically for those participants of the Business Blasters Competition, who May, have been members of the teams selected amongst the top One Hundred teams in the Competition.
- MA Economics: The MA (Economics) programme aims to provide a sound understanding of core, pure and applied economics. The two-vear programme is structured in 4 semesters. While students study economics in considerable depth in this specialized degree, students also apply ideas and techniques from many other disciplines too; including analytics and management. Some of the other features of the programme include: A practice-based and data analytics-focused curriculum and strong base in economic theory and cutting-edge emerging streams Behavioral Economics, GIS and Remote Sensing, Spatial Econometrics, Energy Economics, Health Economics, Analytics, Applied Quantitative Finance, Emerging Financial Markets.

# **Major Student Events in the year**

### PROJECT ECOTOPIA



NSS organized a cleanliness & tree plantation drive in Laxmi Narayan Park (East Delhi) in October, 2021, considering the importance of greenery and cleanliness. The team planted 80+ trees and painted graffiti to stimulate sensitivity towards the environment. also witnessed overwhelming NSS participation, eventually leading to the team receiving a Letter of Appreciation from the Councilor of Vivek Vihar Constituency, Mr. Sanjay Goyal.

#### **BREAKTHRU-TRASHION**



 Aesthetic, Art society of USME, DTU organized Breakthru Trashion event. It was a welcoming performance by the society.

### **BLOOD DONATION DRIVE**



• NSS USME in co-collaboration with the Rotaract club of USME organized a blood donation camp on 14<sup>th</sup> March, 2022. This event was a great success as the societies were able to collect 72 units of blood, which was more than the expectations. The team of doctors for the camp was called from the rotary blood bank, Noida. Students of the department as well as people outside the college donated their blood. It was certainly a memorable day as people came together for this noble cause.

### **FOOD DONATION DRIVE**



 NSS USME in collaboration with 'Sapnon ki Udaan' organized a Meal Distribution Drive on 2<sup>nd</sup> April, 2022. This event was a huge success as more than 100+ meals were distributed at GTB Nagar. Volunteers contributed and helped in making this event a huge success.

### STROKE AWARENESS



 RaC DSPSR organized a webinar in collaboration with Dr. Ish Anand and Mr. Hardeep Sodhi. An Awareness session on what Stroke is and how to prevent and deal with it.

#### ALUMNI MEET



 The Alumni Relationship Cell of Dept. of USME has successfully organized its first alumni meet on 7<sup>th</sup> May, 2022. The event witnessed a huge participation from alumni of various programmes.

# **5 Centres and Other Units**

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

DTU Innovation and Incubation Foundation (DTU IIF) was established as per the policy guidelines of Govt. of NCT of Delhi on summary recommendations for setting Incubators in Higher Education Institutions in Delhi by a working group established the Government of National bν Capital Territory of Delhi, under order No.F.75(73)/2015-16/ Incubation/ADPL/321-330 dated 5/6/15 to pursue the following core objectives as given in the guidelines by the Government of NCT of Delhi:

- To create a culture of entrepreneurship, Start-ups, and Intellectual Property Creation that can to value creation, jobs and employment and do social and economic good.
- To facilitate creation of incubation centre that offers incubation infrastructure-space, computing resources. connectivity, common tools; and environment for coworking, collaboration and innovation.
- To create entrepreneurship challenges based upon existing problems to foster Innovation.

DTU Innovation and Incubation Foundation (DTU IIF) is promoted and established by Delhi Technological University under Section 8, (License Number 107658, CIN of the company is U74999DL2016NPL305531), as per Companies Act of Govt. of India, as Incubation Centre i.e., Technology Business Incubator (TBI) of Delhi Technological University (DTU). The Vision and Mission of DTU-IIF:

# **Organization Structure**

Prof. J. P. Saini Hon'ble Vice Chancellor, DTU	Chairman
<b>Prof. Madhusudan Singh</b> Registrar, DTU	Director
Prof. M. N. Doja Director, IIIT Sonepat	Director
Prof. Anu Singh Lather Vice Chancellor, Dr. B. R. Ambedkar University, Delhi	Director
<b>Prof. Samsher</b> Vice Chancellor, HBTU, Kanpur	Director
Prof. S. K. Garg	Director
Prof. Ashutosh Trivedi	Director
Dr. R. K. Shukla	Director
Prof. Girish Kumar	CEO/Director
Dr. Rajiv Dwivedi	Coordinator
Sh. Sanjay Patidar	Coordinator
Dr. Sachin Taran	Coordinator
Dr. Ritu Agarwal	Coordinator
Dr. Deepali Malhotra	Coordinator
Mr. Kavinder Singh	Coordinator

### VISION

To create the Entrepreneurial Ecosystem by Innovation to provide enhanced value propositions to the customers and create wealth and employment for everyone.

## **MISSION**

Our mission is to provide incubation and business support services to start-ups/ Companies of DTU IIF so that they can grow and prosper.

# **Details of Currently Incubating Startup Companies at DTU-IIF**

COMPANY NAME	CIN	DESCRIPTION	
PROJEXEL TECHNOLOGIES PRIVATE LIMITED	U72900HR2019PTC080008	Our product uses emerging technologies in terms of cell chemistry, IC's, RF transmitter, receivers and other electronics components, which are in the middle of S curve of development and will see step improvements in future. This will help us provide better products as we proceed.	
SEUTUS WASTE MANAGEMENT TECHNOLOGIES PRIVATE LIMITED	U74999DL2019PTC347363	Smart dustbins will be installed in the houses. These bins have two separate compartments one each for biodegradable & non-biodegradable. The Consumer just keep bin house and bin automatically senses and segregates the waste in appropriate compartment waste is also comprised to compact from every bin has a location set via GPS for collection. Once bin gets filled it automatically sends bin location for collection biodegradable is converted into 100% organic manure and sold to farmers in competitive to chemically prepared manure. Rest of the waste in recycled. Manure is converted within three-four-days using highly optimum condition collection of garbage is entirely free for customer.	
LEGASCI CREATIONS PRIVATE LIMITED	U72900DL2019PTC350187	We have built our start-up to revolutionize the way people live their daily lives. Our goal is to make the houses we live in intelligent, and more connected to us. The more intelligent our houses are, the less monotonous tasks we have to perform. People wouldn't have to wonder whether they left their iron switches on before leaving the house. People don't have to wake up at 5 a.m in the mornings to switch on their water pumps. Neither would they have to wait for their rooms to cool down reaching home after a busy day of work, because now, it will be done before they reach. This is what our startup is about, to make our houses a part of us, just like our limbs and muscles, over which, we have complete control.	
OBLIVION TECHNOLOGIES PRIVATE LIMITED	U72900HR2019PTC081511	Modern technology has made our life easier in many aspects. We too have utilized this new technology in the service of the students. We have developed a complete marketplace dedicated specifically to the needs of the students. The current education industry is worth crores of rupees. This industry can be efficiently scaled into an online marketplace. Every transaction inside a campus can be completed without the need of shopkeepers who prey on the money of students. We have done this by being efficient and cost-effective at the same time with the use of latest technology.	
JXR TECHNOLOGIES PRIVATE LIMITED	U74999DL2019PTC344603	The plan is to launch the 2 versions of water pump controller into to market which are superior in terms of technology and lower in cost. Two versions are for Submersible & Municipal Corporation water lines. (PS: Water pump controller is a device that stops the overflowing water from tanks or fill the tank automatically at residential places.)	

COMPANY NAME	CIN	DESCRIPTION
ROADUST ENTERPRISES PRIVATE LIMITED	U72900DL2019PTC351002	Dhannoo Bicycle Sharing is the most innovative bicycle sharing system. It is designed with the vision to become the most customer focus transportation service by feasible pricing and best in class service. It is a dock less bicycle sharing system where people can unlock a bicycle from their mobile phones & enjoy their rides. We have come up with strategies & operational plans to maximize the efficiency of the system. The increasing pollution and road congestion makes it a necessity to have an environment friendly alternative to transportation. Hence we propose to be incubated in the DTU Innovation & Incubation Foundation. It will help us to speed up our Pilot stage & reach our eco-friendly dream to its earliest.
MANISH MEGA MART PVT. LTD.	U52609DL2021PTC391368	MMMart is a newly stabilized 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. We are aiming to develop machinery powered with technology and harvest on predicted demand to reduce wastage, increase profitability and create more jobs.
AIR SEIKI PVT. LTD.	U29192DL2021PTC377699	Design, development and manufacturing of high- performance and cost-effective industrial air filtration systems for pollutants like dust, fumes, smoke, mist, VOCs etc. Category Clean Technology- Industrial Air Purification.
EYTHOR PVT. LTD.	U72200HR2021PTC099893	Eythor is a proposed Product-as-a-Service (PaaS) inventing advanced optimized Robots for domestic and industrial use with Solar Cleaning Robot as our first product. 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. We would be focusing on R&D and deploying Customer-Driven products in the National & International market. We would be using LORA Technology which is long range and low-power mode which is highly efficient along-with high-speed data transfer rate. Our product would be composed of aluminum carbon fiber having high tensile strength and light weight from existing variants present in the market. We would be implementing structural engineering in our robots thus reducing material cost for large scale robots also fast movement speed.

COMPANY NAME	CIN	DESCRIPTION
MONKHOOD LIVING SOLUTIONS PVT. LTD.	U74999DL2019PTC354036	The company's founders have been living away from their parents for 10 years now, the primary problem of finding accommodation that is faced by many students around India is Brokerage, which is a commission taken by local brokers to find a place for people to live in. Brokerage in India is equal to one-month's rent in all cities. Secondly, people need to purchase furniture and appliances as the accommodations generally don't come with all that they need (if it does, they charge you 2 times the rent). Moreover, people don't get reliable and trustworthy domestic help as well, which include cooks, maids. And during their tenure, people often struggle on finding good emergency services too, this includes services like electricians, plumbers. 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	Innovative Scripts Private Limited, Working on the Area of Blockchain technology. Building Cryptographic Document Verification Portal based on the blockchain technology.
ANGETHA AGRO PVT. LTD.	U01100UP2020PTC131700	Angetha Agro works with products of value derived from Cannabis (Hemp). Our tagline is 'Grow in India to Make in India'. Our vision is to become India's largest farming community and boost rural economy by growing indigenous Indian crops and deriving products of high value from them.
CYO GREEN VENTURES PVT. LTD.	U52100DL2022PTC397488	CYOGREEN aims to become an aggregator of local hawkers to deliver groceries and vegetables by providing them best in class technology. Our aim is to completely replace old hawkers with Modern modified e-rickshaw and mobile applications. And with the help of them and their presence in every 500m-1km we will deliver products in no time.
OFFSET GLOBAL TECHNOLOGIES PVT. LTD.	U74999DL2021PTC386794	OffsetGo is India's first Carbon Marketplace - a one stop shops for carbon reporting, crediting and trading. We are creating market-based, tech solutions to mitigate the Climate Emergency. Along with a blockchain based carbon trading platform and carbon credit quality ratings, we also provide Digitools and services for: Reporting your Emissions- Carbon Footprint audit, Al analysis, Internal Carbon Pricing policy, ESG Reporting. Making Carbon Credits- Project identification and development, Credit certification, Quality and Price assessment, connecting with buyers. Our vision is to establish market-based climate action as an economic opportunity for companies that is profitable, responsible and the only way forward for creating and growing a business.

COMPANY NAME	CIN	DESCRIPTION
ECHIOFY PVT. LTD.	U72900DL2022PTC395579	Echiofy is basically an Advanced and Al inclined influencer marketing company. We basically deal for both influencers and companies. Our product basically full fill all the needs of an influencer. We bridge the gap between talent and companies. We are solving monetization and content problems for influencers and time and resource consuming influencer marketing problem for companies. We help influencers and companies to be a brand. Echio, a sophisticated and automated influencer marketing platform that will serve as a one-stop, all-inclusive solution for influencer and business needs.
CATTLEGURU PVT. LTD.	U01100HR2022PTC103327	Cattle GURU is a tech-enabled platform for more than 90 million dairy farmers of India which provides best quality cattle feed right at the doorstep of dairy farmers. We are helping dairy farmers earn more money from dairy farming and make their dairy business more efficient, profitable and convenient.
SOLARVERSE PVT. LTD.	U74999UP2022PTC164702	Currently the renewable sector specifically the solar industry have been very disorganized & being controlled by big Industry/govt. on a very big scale and there is no focus towards small consumers who generally opt for 2-25kwh of plants, whom market size is quite big in terms of the number of household in this country and the main problems they face in starting is less trust b/w installer and consumer and very hectic process have been involved to get a solar plant commissioned at your home, What we are offering to do is to organized the whole sector by digitalizing them so that for a normal consumer can easily opt solar and go for better sustainable energy consumptions, and those who have already opted for this can maintain their plant better. The broader overview of our Startup idea has 3 major parts Where customer can visit the app get the idea of his solar requirement and choose the installer as per his views. Existing solar customers can opt for maintenance related services as per their availability and getting the status of their plant over the app on every visit. And last, provide a platform for vendors to get highly qualified sales customers with the lowest customer acquisition costs and reduce their additional work in terms of maintenance services.
VIKRETAG PVT. LTD.	U72900DL2021PTC385939	VikretaG is a technology-driven marketplace for hyperlocal markets. It is started in 2021 with the aim to create space for itself in the Hyperlocal Services Market that Will Reach US\$ 4,681.3 Million by 2030, at a CAGR of 15.8%. VikretaG enters the market with AI that enables the local vendor to access the power of their own data. It uses AI and Data science to perform predictive modeling and helps local vendors to manage their sales and marketing using the power of their own data. It helps in managing the supply chain and inventory of local shop owners based on their forecasted future sales.

COMPANY NAME	CIN	DESCRIPTION
POLOWINGS HEALTHTECH PVT. LTD.	U72900JH2021PTC017101	Walnut are 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. We are building communities that is lead by health professionals and influencers who understand the importance of health and well being. They are leading by example, influencing & motivating the members to actually work on improving their health conditions. They are spreading health tips and information with accuracy to the best of their knowledge.  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 who care about you and motivate you. The communities have a rather informative feed and content there is much more engaging and useful for the audience. We are also introducing polls and QnA shortly so that our users can engage among themselves that makes them informed, up to date, motivated and in the right direction towards a healthy lifestyle.
DRONEZONE PVT. LTD.	U35914DL2022PTC402893	Our goal is to set up a manufacturing unit for cinematic drones as there's a huge demand from professional photographers, travel vloggers and tech enthusiasts. And only Chinese options are available in the market at a very high price point. We want to focus on building smart budget friendly drones for cinematography. There are a few Indian startups for drones but they are mostly focused on industrial and military purposes. We want to focus on the market of cinematic drones as there is no well-established startup/company in that area leaving a huge gap in the market.

# **DTU-IIF Achievements and Activities**

# 1. Start-up summary

Under Exit/Graduation 10 24 Incubation Pre-Incubation 23

# Year wise breakup

Year	Stage	No. of start-ups
2017-18	Exit/Graduation	4
2018-19	Exit/Graduation	6
2019-20	Incubation	6
2020-21	Incubation	Nil
2021-22	Incubation	12

Year	Stage	No. of start-ups
2021-22	Pre-Incubation	16
2022-23	Incubation	6
2022-23	Pre-incubation	7

# 2. Achievements:

- DTU-IIF startup Cattleguru raised external funding of ₹ 2 Cr for a 10% stake dilution at a valuation of ₹ 20 Cr.
- DTUIIF incubate Sankalp Suman founder (Offset Go company) received the title of National Youth Icon at the parliament of India on account of coming first

5. CENTRES AND OTHER UNITS

- in the National Youth Environmental Parliament on 16<sup>th</sup> April, 2022. With over 200 Universities participating it was an honor to win this laurel for the university.
- Shubham Prajapati MBA (IEV) student start-up (Innovative Scripts Pvt. Ltd.) selected by the Ministry of Education's Innovation Cell & AICTE, for grant support of ₹ 10 Lacs.
- · Mr. Jatin of JXR Technology Pvt Ltd. Selected for Fully Funded Fellowship by International Sustainability Academy, Germany. Currently he is in Germany.
- DTU-IIF start-up Tezz quality won prize of ₹ 2 Lacs at IIT Kharagpur in Global Business model competition.
- DTU ranked 2<sup>nd</sup> in Atal Ranking of Institutions on Innovation Achievements (ARIIA)-2022 in the category of Technical University (Govt. & Govt. Aided. DTU-IIF supported this ranking participation.
- Institute Innovation Council (IIC) DTU ranked 3.5 on a scale of 4 by MRHD. DTU-IIF coordinates IIC activities within the university.

# 3. New Initiatives

- Grant applications
  - a) Project of ₹ 5 Crore has been recommended under NIDHI-I-TBI scheme.
  - b) Grant application of ₹ 10 Cr submitted for Atal Incubation Centre under Atal Innovation Mission, NITI AYOG. DTU proposal has been short listed for next stage.
  - c) Application for ₹ 5 Crore grant under Start-up India Seed fund scheme has been submitted.
- Graduation/Exit of start-ups For 10 start-ups of first and second phase this process has been initiated.

- Accelerator program –Boardroom
  - An MOU is signed with company- Startup Board Business Services Pvt Ltd and this company is conducting an accelerator program for 15 start-ups.
- · Internship with start-ups under USIP scheme
  - 50 interns are currently deployed with start-ups and helping for website development, app development and tech support.
- Summer Industrial Training
  - More than 200 students have been offered internship with DTU start-ups.
- Institute Innovation Council (IIC)-DTU Events: 31
  - 14 IIC Calendar Activities
  - 11 Self Driven Activities
  - 4 Celebration Activity
  - 2 MIC Activities
  - Students Participated: 2816
  - Faculty Involved: 450
  - External Participants: 431
  - Expenditure: ₹ 2,24,330/-
- Innovation Ambassadors (IA) Training for capacity building and to create a pool of mentor in the university
  - a) 10 faculty members completed foundation level training from MoE.
  - b) Each IΑ have conducted motivation sessions Entrepreneurship in Delhi Govt schools.
  - c) They conducted two motivation sessions on Innovation Entrepreneurship within university.
  - d) They also run Innovation/ Entrepreneurship clinics within the university.

- Augmentation of Physical Infrastructure
   A proposal for a built-up space of 23,000 sq feet is submitted to engineering cell.
- National/International Partnership
  - a) 4 MoUs have been signed.
  - b) 3 more are under process.
- University Innovation and Start-up Policy (UISP)
  - a) Create a guiding framework to enable DTU to actively engage students, faculties and staff in innovation and entrepreneurship related activities.
  - b) Four meetings of the committee has been held so far and first draft of the policy is finalized.

- Participation in Start-up India campaign 4 DTU-IIF Start-up Company are participating in national start-up awards (NSA-2022).
- Standard Operating Procedures (SOPs) for accessing DTU facilities
  - a) Laboratories, library, dispensary, sports and other facilities to DTU-IIF incubators.
  - b) A committee finalized the SOPs and these have been circulated to departments for their comments. Comments received from some department are being incorporated in SOPs.

## 5.2 Human Resource **Development Centre (HRDC)**

- In consonance with the National Policy on Education (NPE), 1986 of University Grants Commission, Delhi Technological University established Human Resource Development Centre under section 7(13) of the Delhi Technological University Act, 2009 with effect from 1st January, 2018.
- HRDC is focused on the crucial development of quality ensured delivery of education to continuous knowledge up-gradation, capacity building and motivation of teachers for accepting challenges arising from new research and advancement in technology and recent trends of breaking barriers of subject related to science and technology.
- At present, there are 66 Human Resource Development Centre (HRDC) established by UGC in different universities over a period of time since 1986.

## **Organisation Structure**

Name	Designation
Prof. S. Anbu Kumar (Civil Engineering)	Director
Prof. Vinod Singh (Applied Physics)	Associate Director
Dr. Bharti Singh (Applied Physics)	Coordinator

## **Types of Programs**

#### **Orientation Programs:**

 Every new faculty member in higher education is required to undergo a fourweeks Orientation / First level Program which is 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).

#### Refresher's Course and Workshops:

 These courses/workshop 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 six-days duration courses especially on research methodology and specialized themes of interest.

#### **Trainings / Programmes Conducted**

- Two-days online workshop on "Atomic Energy: Peaceful use and Job Opportunities" was jointly organized by HRDC-DTU, HBTU, Kanpur and NPCIL during 6th - 7th September, 2021 for 800 participants.
- "National Education Day Webinar" was organized by HRDC-DTU on 11th November, 2021 for 200 participants.
- · Training program for newly recruited Assistant Professors was organized by HRDC-DTU during 29th - 30th November, 2021 for 46 participants.
- "National Science Day webinar" was organized by HRDC - DTU on 28th February, 2022 for 150 participants.

## 5.3 Solar Energy Centre

Office In-charge: Mr. Pradeep Yadav (JE, Electrical Engineering)

Operation of 432 KW SPV roof top plant on resco model and 40 KW SPV plant on capex model functioning at Delhi Technological University.

Operation of 432 KW SPV roof top plant on resco model and 40 KW SPV plant on capex model is functioning at DTU, Delhi.

DTU has installed 432 KW of Solar Photovoltaic Rooftop Plant on resco model by M/S Hero Future Energies on the terrace of the various departments. This has been further added by 40 KW SPV plant by M/S Photon Energy Systems Ltd. on capex model on the rooftop of administrative building. In total, 472 KW SPV plant is functional in DTU. Both the plants have been working very satisfactorily. All 472 KW solar panels have been installed in science block (108 kWp, having one Electronic Solar Metre), Mechanical Block (150 kWp, having two Electronic Solar Metres) and Electronics Block (174 kWp, having three Electronic Solar Metres).

It has been observed that the maximum

solar electricity output of all the 432-KW solar panel from all the 6 electronic is found metres 3,55,157 kWh in the month of April, 2022. This is on an average 3.81 kWh per day production from 1 KW panel.

A 40 KWp system has been also commissioned in the month of June, 2015 and functioning properly. It has two inverters of 20 KW each connected to the above system. The control room has been built on the ground floor at the back of the building. The DC power so generated by the SPV plant is converted into AC power by the SSE model inverters and feed to the three phase DTU grid.

The above two systems are grid connected to the TATA Power Delhi Distribution Limited. (TPDDL). Hero Future Energies has provided the solar metre readings for the last one year from August, 2021 to July, 2022 as given in the table below.

Month	Reading KWh (Units)	Unit Charges in (₹)	Bill Amount (₹)
Aug, 21	47,709	5.8	₹ 2,76,712/-
Sep, 21	46,564	5.8	₹ 2,70,071/-
Oct, 21	43,505	5.8	₹ 2,52,329/-
Nov, 21	39,498	5.8	₹ 2,29,088/-
Dec, 21	41,498	5.8	₹ 2,40,688/-
Jan, 22	22,663	5.8	₹ 1,31,445/-
Feb, 22	52,078	5.8	₹ 3,02,052/-
Mar, 22	53,764	5.8	₹ 3,11,831/-
Apr, 22	61,234	5.8	₹ 3,55,157/-
May, 22	49,588	5.8	₹ 2,87,610/-
June, 22	50,062	5.8	₹ 2,90,360/-
July, 22	38,733	5.8	₹ 2,24,651/-
Total	5,46,896	5.8	₹ 31,71,994/-



#### 5.4 Kitchen Waste Plant

#### Officer-In charge; Prof. J. P. Kesri (Mechanical Engineering)

Delhi Technological University in collaboration with Bhabha Atomic Research Centre (BARC) has set-up 500 kg per day kitchen waste biogas plant behind the main canteen of DTU campus. This technology is developed by Dr. Sharad Kale from Babha Atomic Research Centre Mumbai. This is based on Nisargruna technology. It is an environment friendly technology, which delivers two valuable products i.e., methane and organic manure. The food waste from the canteen is grinded first in mixture grinder installed on the inlet platform, which is mixed with equal amount of water and it is fed into inlet of the installed biogas Plant. This plant was installed and commissioned in April, 2014. Initially, the system worked very nicely with moderate and during summer seasons temperatures but during winter seasons the performance reduces. The methane gas so generated by this plant is used for cooking in the main canteen.

This technology is very useful and is suggested to be replicated in Azadpur, and Okhla sabzi mandis and other Municipal Corporations bodies to process their vegetable waste as most of biodegradable waste can be utilized as raw material for the biomethanisation plant. organic manures are valuable product for horticulture and farming. Nevertheless, whole technology creates various types of opportunities for different prospects. Recently another Biogas has plant been set up in DTU campus near to DTU library which is used for the generation of electricity. Waste segregation at the source is another major issue which needs proper attention. Biogas production is faster because of combination of aerobic and anaerobic digestion technology. Electricity generation

from biogas is also one of the potential benefits. This technology development will save environment to greater extent. It will also provide benefits in the form of Biogas, reduction in Green House Gas emission, health hazard benefits, social benefits and benefits in terms of financial investments. Research is undertaken to convert methane in to hydrogen under high temperature and reaction with steam. Many undergraduate students are working on this project on conversion of methane in to hydrogen production as minor and major projects in 7<sup>th</sup> and 8<sup>th</sup> semesters as well as innovative projects in 1st, 2nd, 3rd and 4th semesters. In future there will be scope for extra benefits like subsidies and benefits like carbon credits, which will give high rate of return on total investment. Entrepreneurs will excel in their ventures by selling services and products related Technology. DTU is in contact with some other organizations to provide consultancies in this area. The DTU students have already produced some research papers. Few students are doing their B.Tech., M.Tech. and Ph.D. projects. Presently some students have taken up this project during their summer internship.



## 5.5 Centre for Advanced Studies and Research in **Automotive Engineering**

#### (www.casrae.org)

#### Officer-In charge; Prof. Naveen Kumar (Mechanical Engineering)

The Centre for Advanced Studies and Research in Automotive Engineering (CASRAE) was founded in 2003 in the erstwhile Delhi College of Engineering (now Delhi Technological University) with the objectives of developing a variety of renewable transportation fuels and for improving the existing engine technologies to reduce the dependence imported crude petroleum on minimize harmful exhaust emissions for a cleaner environment. The center has seen radical growth in the last 19 years, and it is considered one of the front-runner research centers in India and abroad. The faculty, along with the students, has published research papers in a large number of International Journals and has also attended international conferences around the globe. The faculty and students are attending various American Society of Mechanical Engineers (ASME), Society of Automotive Engineers (SAE), ISFT Conferences and publishing papers in Elsevier, Wiley, Springer, Taylor & Francis, SAE, IMechE, and ASME Journals.

The prime focus areas in the Centre include; Renewable Transportation and Off-Road Application Engine Fuels. Improvement and Enhancements in the Design of Compression Ignition and Spark Ignition Engines, Development of Micro-Turbojet Engines, Tribological Studies, Design features of Aircraft along with study of Aerodynamic Characteristics of various airfoils, Hybrid Vehicles, Study of Spray Injection for Mitigation of Climate-Change.

The study on other promising alternative fuels such as Renewable Diesel / Jet Fuel. Compressed Natural Gas (CNG), LNG, Hydrogen, etc. are also under research.



The Students' Research Group is also currently working on the conversion of Agro-Residue (Parali) into value-added products and fuel under the direction of worthy Chief Secretary of Delhi.



## General Awareness and **Interactive Session: World Biofuel Day**

On the occasion of 'World Biofuel Day', CASREAE - DTU & IMechE, DTU Chapter organized an informative session on 10th August, 2021 to spread the awareness about biofuels amongst students of various schools / colleges. This day is celebrated to commemorate the working of the first Single-Cylinder Diesel Engine in 1893 by Rudolf Diesel, who ran the engine on Groundnut oil. This remains a reminder to strive and make biofuel more accessible.

The theme of the day was "Promotion of Biofuels for a Better Environment." which is highly relevant as biofuel awareness is of prime importance in a agriculture based country like ours.





## **Industrial Visit: KIET Automotive Mechatronics Centre** (Established by KIET Group of Institutions and Mercedes Benz)

CASRAE - DTU and IMechE - DTU chapter organized an industrial tour of students of DTU to KIET Automotive Mechatronics Centre (Established by KIET Group of Institutions and Mercedes Benz) at KIET Group of Institutions. Ghaziabad on 12th March, 2022. The aim was to organize a tour to provide appropriate exposure to the Practical Working Environment and to create awareness of new Industrial Practices of various automotive systems.

students were familiarized with The concepts of IC Engines / Passenger Vehicles, its working and maintenance by the experts of Mercedes Benz. It was a very informative demonstration for the students as they could see the rationale behind

preventive and break down maintenance and also how such are adapted in actual practice.

#### **Green Energy: The New Paradigm** for Cleaner Environment

Green Energy has been at the forefront of priorities of governments worldwide due to the short supply and price perturbation of conventional petroleum fuels along with the climate change caused by them. The different pathways of green energy, e.g., Solar, Biomass, Biofuels, Hydrogen, Hydroelectric, EV, Waste, etc., are gaining momentum and becoming a game changer. Considering the importance and relevance of Green Energy in Nation's Economy and Environment, an online quiz was organized on 13th March, 2022 by CASRAE, IMechE DTU Chapter, and other esteemed Institutions on the theme "Green Energy: The New Paradigm for Cleaner





Environment" for UG, PG, and Ph.D. students of all disciplines. A cash prize was awarded to the top 3 winners along with an e-certificate. Also e-certificate was provided to top 10% of top scorer.

#### An Online Workshop and Quiz on "Beyond Petroleum-The Strategies for Future Energy Needs"

The CASRAE, IMechE DTU chapter, and other esteemed Institutions organized an online full-day Workshop on "Beyond Petroleum-The Strategies for Future Energy Needs" on 27th March, 2022. The leading Researchers, Scientists, Industry Professionals, and Government Functionaries touched upon the pathways suitable for not only India but the World as a whole. It was an excellent opportunity for UG / PG students and Ph.D. scholars. A quiz was organised after the workshop. Top 3 winners were awarded with a cash prize and e-certificates were given to all successful participants.



**Dr. Ftwi Yohaness Hagos**College of Engineering,
Sultan Qaboos University,
Oman

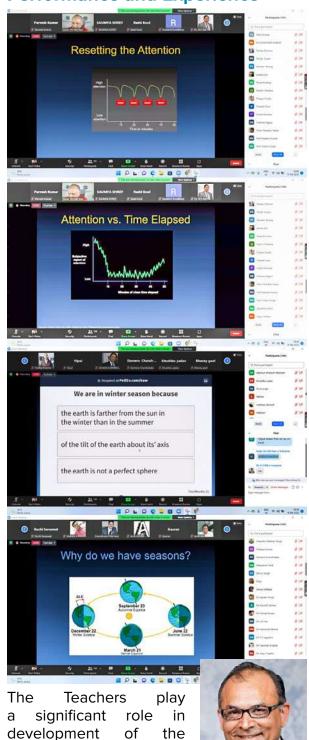


**Mr. Nikunj Sharma** University of Quebec, Canada



Mr. Abhishake Goyal Queen's University Canada

# Online Workshop on "Simple ways to Improve Students' Classroom Performance and Experience"



**Prof. Autar Kaw** 

society as they are the

inspiration, role models,

and motivation for the

leaders of tomorrow. In the present age, teaching as a profession has become very challenging as the half-life of the knowledge has shortened, and the satisfaction of teachers / students in the class is a monumental task. The teaching skills and the pedagogy adopted in the class have also become very demanding.

The CASRAE-DTU, IMechE DTU Chapter, in association with other premier institutions, organized a webinar on "Simple ways to Improve Student's Classroom Performance and Experience" on 11<sup>th</sup> April, 2022.

The speaker was Professor Kaw, currently a Professor at the University of South Florida, USA, and US Professor of the Year in 2012. The workshop was aimed to acquaint students and teachers with new skills to enable classroom teaching & learning in the highly globally competitive environment.

# Workshop on "Use of Robotics & New Technology for Engineering Faculty & Students"



Professor Rajiv Dubey, Head, Mechanical Engineering Department & Director, CARRT, University of South Florida, Tampa, USA



Ravi S. Kochak Retd. Add. Member/ Production Units Indian Railways Tech. Consultant



**Shri Tuhin Srivastva** Social Entrepreneur & Advisor, SAE KIET



Dr. Shubham Shukla
In Charge Centre For
Robotics and Mechatronics
KIET Ghaziabad, Visiting
Faculty Al and ML at IIIT
Pune

A full-day workshop was organized by CASRAE and IMechE-DTU chapter on "Use of Robotics & New Technology " on 29th July, 2022. The speakers were esteemed specialists in their field. The workshop aimed to expose students and faculty to the cutting edge in Technology for Mechanical engineering, viz. Robotics and Mechatronics. The workshop covered various facets of Robotics relevant to its implementation like Finite Element Modeling and Electronics Architecture. It was an excellent opportunity for students and faculty to acquire knowledge about Industry 4.0.

#### **Ongoing Projects**

- Conversion of Agro-Residue (Parali) into value-added products and fuel under the direction of worthy Chief Secretary of Delhi.
- Development of Semi-Autonomous RFID
   based Electric Vehicles (EV).
- Use of Bio-origin Jet fuel in aircraft or similar engines.
- Utilization of Ethanol in Diesel Engine.
- Impact study of Retrofitment of diesel vehicles to electric vehicles in Delhi.
- Analysis and Modeling of Proton Exchange Membrane Water Electrolyze.
- Production of Biodiesel through Super-Critical Transestreification Route.
- Lubrication and wear study of use of ULSD.



• Studies on Bio-Additive for performance enhancement and emission reductance in Bio-Fueled diesel engine.





#### **Research Excellence Award**

· Four Ph.D. scholars, Mukul Tomar, Chandra Shekhar Singh, Ankit Sonthalia and Hansham Dewal were conferred the Research Excellence Award in the University Ceremony on 3<sup>rd</sup> March, 2022. The details of the papers are given as under:



· Ankit Sonthalia, Shivam Garg, Rishav Sharma, Thiyagarajan Subramanian and Naveen Kumar "Effect of Electrostatic

Precipitator on Exhaust Emissions in Bio-Diesel fuelled CI engine" Environmental Science and Pollution Research (Springer), vol. 28, pp. 11850-11859, 2021, Impact Factor: 4.223. https://doi. org/10.1007/s11356-019-07359-1



- Ankit Sonthalia and Naveen Kumar "Comparison of Fuel Characteristics of Hydrotreated Waste Cooking Oil with its Bio-Diesel and Fossil Diesel" Environmental Science and Pollution Research (Springer), vol. 28, pp. 11824-11834, 2021, Impact Factor: 4.223. https:// doi.org/10.1007/s11356-019-07110-w
- Chandra Shekhar Singh, Naveen Kumar and Raghvenrda Gautam "Supercritical Transesterification Route for Bio-Diesel Production: Effect of Parameters on Yield and Future Perspectives" Environmental Progress & Sustainable Energy (Wiley),

- vol. 40, no. 6, pp. e13685, 2021, Impact Factor: 2.431. https://doi.org/10.1002/ ep.13685
- Mukul Tomar, Ankit Sonthalia, Naveen Kumar and Hansham Dewal "Waste Glycerol derived Bio-Propanol as a Potential Extender Fuel for Compressed Ignition Engine" Environmental Progress & Sustainable Energy (Wiley), vol. 40, no. 2, pp. e13526, 2021, Impact Factor: 2.431. https://doi.org/10.1002/ep.13526

## **Publication by Prof. Naveen Kumar and Students of CASRAE** in a Peer - Reviewed Journal during 2021-22:

- · Ankit Sonthalia, Shivam Garg, Rishav Sharma, Thiyagarajan Subramanian and Naveen Kumar "Effect of electrostatic precipitator on exhaust emissions biodiesel fuelled CI enaine" Environmental Science and Pollution Research (Springer), vol. 28, pp. 11850-11859, 2021, Impact Factor: 4.223. https:// doi.org/10.1007/s11356-019-07359-1
- Ankit Sonthalia and Naveen Kumar "Comparison of fuel characteristics of hydrotreated waste cooking oil with its biodiesel and fossil diesel" Environmental Science and Pollution Research (Springer), vol. 28, pp. 11824-11834, 2021, Impact Factor: 4.223. https:// doi.org/10.1007/s11356-019-07110-w
- Sandeep Kumar Barnawal, Naveen Kumar, "Experimental investigation and artificial neural network modeling of performance and emission of a CI engine using orange peel oil- diesel blends", Energy Sources, Part A: Recovery, Utilization, and Environmental Effects (2021) https://doi.org/10.1080/1556703 6.2021.1967520 (Publisher - Taylor and Francis; SCI Indexed)

- Vaibhav Singh, Naveen Kumar, "Numerical investigation of the effect of nozzle hole diameter on the combustion, emission, and spray characteristics in a diesel engine" Energy Sources, Part A: Recovery, Utilization, and Environmental Effects (2021) https://doi.org/10.1080/155 67036.2021.1980155 (Publisher - Taylor and Francis; SCI Indexed)
- Naveen Kumar, Rashi Koul, RC Singh, analysis "Comparative of ternary blends of renewable Diesel, diesel and ethanol with diesel" Sustainable Energy Technologies and Assessments (2021). https://doi.org/10.1016/j.seta.2021.101828 (Publisher - Elsevier; SCI Indexed)
- Naveen Kumar, Kirat Singh, "Study combustion, performance emissions characteristics of oxygenated constituents and methanol fumigation in the inlet manifold of a diesel engine" Sustainable Energy **Technologies** and Assessments (2021). https://doi. org/10.1016/j.seta.2021.101748 (Publisher - Elsevier; SCI Indexed)
- Chandra Shekhar Singh, Naveen Kumar and Raghvenrda Gautam "Supercritical transesterification route for biodiesel production: Effect of parameters on yield and future perspectives" Environmental Progress & Sustainable Energy (Wiley), vol. 40, no. 6, pp. e13685, 2021, Impact Factor: 2.431. https://doi.org/10.1002/ ep.13685
- Mukul Tomar, Ankit Sonthalia, Naveen Kumar and Hansham Dewal "Waste glycerol derived bio-propanol as a potential extender fuel for compressed ignition engine" Environmental Progress & Sustainable Energy (Wiley), vol. 40, no. 2, pp. e13526, 2021, Impact Factor: 2.431. https://doi.org/10.1002/ep.13526
- · Khushbu Yadav, Naveen Kumar, Rajiv Chaudhary, "Effect of synthetic and

aromatic amine antioxidants on oxidation stability, performance, and emission analysis of waste cooking oil biodiesel" Environmental Science and Pollution Research (2022). https://doi.org/10.1007/ s11356-021-18086-x (Publisher Springer; SCI Indexed)

- Harveer Singh Pali, Abhishek Sharma, , Yashvir Singh, "Optimization of long-term storage stability of Kusum biodiesel using herbal antioxidant" Biomass Conversion Biorefinery (2022), https://doi. and org/10.1007/s13399-022-02444-x https:// link.springer.com/article/10.1007/s13399-022-02444-x (Publisher - Springer; SCI Indexed)
- · Vipul Saxena, Naveen Kumar, and Gautam, Raghvendra "Experimental Investigation on the Effectiveness of Biodiesel Based Sulfur as an Additive in Ultra Low Sulfur Diesel on the Unmodified Engine", Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Vol. 44, 2022 - Issue 2 https://doi. org/10.1080/15567036.2022.2059596 Koul R, Kumar N, Singh RC. "Comparative analysis of renewable diesel and biodiesel produced from Jatropha oil." Environmental Progress & Sustain Energy 2022:1-17(Publisher: Wiley, SCIE indexed). https://doi:10.1002/ep.13832

#### **Paper Presentation in** Conference / Workshop / Seminar

Vipul Saxena, Naveen Kumar, and Raghvendra "Comparative Gautam, assessment of unmodified diesel engine characteristics with commercial diesels", International Conference on Mechanical Engineering (INCOME-2021)

#### Pre-Ph.D. Seminar:

Ms. Rashi Koul (2K17/Ph.D./ME/17) Topics: "Performance, Emission, and

- Combustion Studies of a Renewable Diesel in a Compression Ignition Engine".
- Kirat Singh (2K16/Ph.D./ME/2) Topic: Some Investigations of the use of Renewable Fuel in Compression Ignition Engine.

#### M.Tech. Awarded:

- Sandeep Kumar Barnawal Topic: "Evaluation of Performance, Emission Characteristics Using Artificial Neural Network in a Unmodified Diesel Engine Fuelled With Orange Peel Oil & Diesel Blends" DTU, 2021
- Vaibhav Singh Topic: Some Studies On Engine Combustion, Emission, and Spray Characteristics of A CRDI Diesel Engine with Variable Nozzle Geometry Using Ansys DTU, 2021.

## **Admission in Higher Education** (Overseas)

Prashant Chandra Pujari, department Rank 2 (DR-2) of the Mechanical Engineering department in 2021 and an active member of CASRAE, secured admission to a Ph.D. course at the University of California, Berkeley, the USA



## MITACS Research Internship

Sheel Bhadra from CASRAE was selected and undergone the prestigious Mitacs Canada Globalink Research Internship during June,-August, 2022. He worked at York University, Toronto, Canada, under the supervision of Dr. Paul O'Brien on Thermal Energy Storage for Enhanced Photovoltaic Performance. It May, be noted that Mitacs Globalink Research Internship is a competitive initiative for international undergraduates around the globe and only very few international students make it to avail this. The training and knowledge gained by the student shall undoubtedly

help CASRAE to achieve its targets and objectives in a better way.

#### **Patent**

The CASRAE was awarded with the patent of supercritical reactor system for bio-diesel synthesis. A self-pressurized supercritical reactor system for Biodiesel Synthesis and its method thereof", Patent Number: 2021105874; August, 2021; IP Australia.



#### 5.6 Centre for Value **Based Education**

Board of Management in its 26th meeting on 8th December, 2017 has approved the establishment of Centre for Value based Education at DTU. The role of the centre is to prepare and implement innovative resource material for value education for students, encourage the students about the benefits of implementing professional ethics in their later life as professional. Also organizing workshops and STCs to motivate the teachers to use value education, yoga and meditation as a tool in making better citizen.

#### Aim:

To create awareness, inspiration among the students and teachers about the need of higher dimensions of education in becoming enlightened citizens, which is achieved by imparting Techniques and Knowledge for promoting human values and thereby making better engineers with the better use of ethics and moral values in professional and personal lives.

## **Objective:**

- Introduction of an Audit Course in the 1st year with appropriate credit weightage on Ethics, Human Values, Social and Spiritual Values.
- · To undertake research in the area of Interaction of human values and promote understanding of its implications.
- Organizing workshops to train teachers of various technical institutions in this field.

## **Organisation Structure:**

Name	Designation
Prof T. Vijaya Kumar	Coordinator
(Civil Engineering)	

Name	Designation
Prof. Yasha Hasija	Deputy Co-
(Biotechnology)	coordinator
Dr. Vikas Gupta	Deputy Co-
(DSM)	coordinator

#### **Activities Undertaken:**

The following Foundation Elective Courses (FEC) are offered for UG students by the centre.

- FEC 47 "Value driven Leadership"
- FEC 56 "Universal Human Values"
- FEC 57 "Leadership Mastery through Self-management"
- FEC 58 "Introduction to Science and Practice of Happiness"

#### **Events organized for UG Students**

- · Organized an interactive session with Hon'ble VC, Deans, senior faculty members, Deans etc. with Dr. S. S. Rekhi, CEOR -systems on 4th May, 2022 on "Science and Practice of Happiness".
- · Organized an expert lecture for the benefit of students by Dr. Sammdu Chetri on "Gross National Happiness" on 22<sup>nd</sup> March. 2022.
- Centre is actively involved in Students' Induction Program' by inviting renowned persons in the field of "Value Education, Yoga and Meditation". Resource Persons: Sh. Sanjay Sehgal (DCE Alumni), Dr. S. S. Rekhi, Dr. Manas Mandal etc.



#### **Interaction with Students:**

The Centre is involved in arranging continuous interaction of our students with eminent personalities and Alumni of DTU (DCE) for their overall development and growth. Following are some glimpses:



## 5.7 TIFAC-Core in Fiber Optics and Optical Communication **TIFAC Core @ DTU**

TIFAC-Core in the area of Fiber-Optics & Optical Communication, has been established in Delhi Technological University (Delhi College of Engineering), Delhi for which an agreement was signed between TIFAC & DCE on 6th July, 2004. The activities of this TIFAC-CORE at DCE are supported by TIFAC/DST, Govt. of NCT of Delhi and partners from industries under Mission REACH Program, Technology Vision-2020, Govt. of India.

#### Vision

To establish a world class knowledge centre providing education in the areas of Fibre Optics and Optical Communication System that promotes research and development leading to innovative applications of Fibre Optics, fostering institute-industry linkages and entrepreneurial culture encompassing all aspects of interaction of light and matter for the betterment of the society.

## **Organisation Structure:**

Name	Designation
Prof. R. K. Sinha (Applied Physics)	Chief Coordinator
Dr. Yogita Kalra (Applied Physics)	Coordinator

## **Research Progress:**

#### **Research Papers in Journals:**

- · P. Agarwal, K. Kishor, and R. K. Sinha, "Ultrasensitive dual-band terahertz metasurface sensor based on all InSb resonator," Opt. Commun. 522, 128667 (2022).
- V. Sherawat, R. Bokolia, and R. K. Sinha, "Impact of thermal and refractive index tuning on the bandgap and band-edges of a silicon photonic crystal waveguide with sensing applications," Opt. Commun. 518, 128348 (2022).
- · R. Reena, Y. Kalra, and A. Kumar, "Electromagnetically induced

- transparency-based dielectric metal metamaterial and its terahertz sensing application," Appl. Opt. 60, 10610 (2021)
- T. S. Saini and R. K. Sinha, "Mid-infrared supercontinuum generation in soft-glass specialty optical fibers: A review," Prog. Quantum Electron. 78, 100342 (2021).

#### Research Papers in International/ **National conferences:**

- · Meenakshi, P. Saurav, and K. Kishor, "Design and simulation of metamaterial under the THz frequency for short-range wireless communication and military purposes," Mater. Today Proc. 62, 3729-3733 (2022).
- · H. Kumar, T. Jain, M. Sharma, and K. Kishor, "Neural network approach for faster optical properties predictions for different PCF designs," J. Phys. Conf. Ser. 2070, 12001 (2021).
- · P. Purnima, S. Sharma, and K. Kishor, "Design and simulation of Ku-band microstrip patch antenna for satellite interchange application," in CubeSats and SmallSats for Remote Sensing, V.C. D. Norton, T. S. Pagano, and S. R. Babu, eds. (SPIE, 2021), pp. 4.
- B. Sharma, K. Kishor, A. Pal, S. Sharma, and R. Makkar, "Broadband Spiral Optical Delay on a Silicon Nitride Platform at 1310 nm Wavelength," in Proceedings of the International Conference on Atomic. Molecular, Optical & Nano Physics with Applications (2022), pp. 167-173.

#### **Book Chapter in Books/Lecture Notes** authored/contributor:

 "Photonic Crystal Cavity-Based Sensors and Their Potential Applications", Than Singh Saini, Ajeet Kumar, Ravindra Kumar Sinha, in the book entitled "Nanomaterials-Based Sensing Platforms" Apple Academic Press, ISBN 9781003199304, (2022).

## 5.8 Centre for Advanced Production and Industrial Engineering

#### Research

CAPIER, Centre for Advanced Production and Industrial Engineering Research, a Centre for Excellence has been established on 8<sup>th</sup> April, 2015. CAPIER is known for organizing expert lectures, workshops and industry institute interactions.

CAPIER invites B.Tech. and M.Tech. students for internship during summer and winter holidays.

CAPIER also organizes visit to industries for motivating the students towards advanced technology. CAPIER holds a name in the institution for supervising many good projects for B.Tech., M.Tech., and at the level of Ph.D. CAPIER also support IJAPIE, an International Journal in the Area of Production and Industrial Engineering, a peer reviewed journal with ISSN 2455 - 8419.

CAPIER initiated organizing an international conference in the name of ICAPIE, International Conference on Advanced Production and Industrial Engineering.

The Seventh international conference ICAPIE'22 was planned at NIT, Delhi during June, 2022. Selected papers will be published in SCOPUS Indexed and SCIE Journals.

CAPIER also support faculty development programs and staff development programs. AIM-2015 and SDTSMT-2015 were conducted successfully with sponsorship of TEQIP-II. AMOM 2017 a two-weeks program was marked as best FDP by the participants. Pro-De 18 and several other one-day seminar cum workshops and Internships were organized.

A talk on ROBO and practice of Robotics and Automation was organized. CAPIER at Delhi Technological University is getting good name and growing with experienced faculty and budding researchers.

Industry Institution Interactions were held regularly.

#### **VISION**

To be Centre for Excellence in the area of production and industrial engineering, playing its role in preparing technical teachers and students for future requirements at national and global level.

#### **MISSION**

- Faculty Development
- Skill Development
- Entrepreneurship Development
- · Research and Publications
- Industry- Institute Interaction

#### **AREA OF RESEARCH**

- Materials
- Design
- · Product Design
- Interaction Design
- Industrial Design
- Production Process
- Manufacturing
- Mechatronics
- CAD/CAM/CIM
- FMS/Automation
- Lean Manufacturing
- Optimizing Techniques
- Quality Control
- Production/Operation Management
- Supply Chain Management
- Project Management
- · Financial Management

- Production Economics
- Electronics in Manufacturing
- Power Skills in Manufacturing
- Software Security and Management
- Small Scale Industries Management

## **Organisation Structure:**

PRINCIPAL COORDINATOR	Dr. Ranganath M. Singari	
ADVISORY MEMBERS	Prof. S. K. Garg Prof. R. S. Mishra Prof. Vipin Prof. Reeta Wattal Prof. R. C. Singh Prof. Rajiv Chaudhary	Prof. Qasim Murtaza Prof. S. G. Warkar Prof. Nand Kumar Prof. Girish Kumar Prof. Nitin Puri Prof. Roli Purwar
FACULTY COORDINATORS	Dr. M. S. Niranjan Dr. N. Yuvraj Dr. Harish Kumar	Dr. Saurabh Agarwal Ms. Taruna Singh Dr. Ravi Butola
RESEARCH COORDINATORS	Dr. Shadab Ahmad Mr. Mohd Tayyab Ms. Varsha Pathak	
STUDENT COORDINATORS	Ms. Vrinda Aggarwal Mr. Bhavay Khatri Ms. Hrutuja Mr. Dhruv Deo Pathak	
STUDENT CO-COORDINATORS	Ms. Sakshi Kumari Mr. Himanshu Kumar Ms. Bhumika Mr. Nidhish Srivastava	

## 5.9 Intellectual Property Right (IPR) Cell

#### Introduction: -

#### Intellectual Property Right Cell was constituted on 22<sup>nd</sup> June, 2017 and reconstituted on 15th February, 2018 under IRD. At present, it consists of 1 Coordinator and 1 Co-coordinator, detailed as under:

## **Organisation Structure:**

Name	Designation
Prof. Kapil Sharma (Information Technology)	Coordinator
Prof. Gurjit Kaur (Electronics & Comm. Engg.)	Co-coordinator

## List of Patents in year 2021-2022

S. No.	Inventor Name/ No	Title	Date	Status	Dept.
1	Sachin Kumar Aggarwal, Kapil Sharma With Samsung electronics co. Ltd./ US20210265874A1 (Int Publication Number)	Apparatus and method for transmitting a signal in a wireless power transmitter	26 <sup>th</sup> August, 2021	Published	IT
2	Bhawna Rawat Poornima Mittal 202011056665	Reconfigurable Static Random Access Memory (SRAM) and Method Thereof	28 <sup>th</sup> January, 2022	Published and FER issued	ECE
3	Dr. Mohan Singh Mehata, Aneesha/ 202211013803	Probe For the Detection of Ferric Ions in Aqueous Environments and Method Thereof	14 <sup>th</sup> March, 2022	Reply Filed. Application in amended examination	АР
4	Dr. Rahul Katarya, Anjum, Harsh Mittal, Aditya Rai, Vedant Gupta/ 202211016054	An autonomously operating surface water robot and method thereof	23 <sup>rd</sup> March, 2022	FER Issued	CSE
5	Dr. Gurjit Kaur, Akanksha Srivastava/ 202211029217	Opportunistic Bandwidth Access Using Unlicensed Spectrum as A Backup Resource (Obub)C/P-49/C To 54/	20 <sup>th</sup> May, 2022	Awaiting publication	ECE
6	Reetu Yadav, Roli Purwari/ 202211031911	A Soft Freezing Method to Develop Low Temperature Reversible Conductive Silk Fibroin Aqueous Gel Electrolyte	3 <sup>rd</sup> June, 2022	Awaiting publication	AC
7	Rahul Katarya, Anjum, Harsh Mittal, Kartikeya Singh Chauhan, Anunay Gupta, Shreyansh Gupta/ 202211032321	Precision Agriculture Rover for Plant Disease Detection and Control	6 <sup>th</sup> June, 2022	Application Awaiting Examination	CSE

## **Workshop Organized and Participation**

- · Intellectual Property Rights (IPR) Cell, IRD, DTU, organized a workshop on "Intellectual Property Rights & IP Management" on 16th March, 2021 with IPR Experts in online mode. Total participation was 119, which includes 87 students and 32 faculties.
- · One-day workshop on "Why IP is important in academia?", organized by MoE's Innovation Cell to celebrate World IP Day on 26th April, 2021. Speakers: Dr. Abhay Jere & Dr. Mohit Gambhir.

#### 5.10 Multidisciplinary Centre for **Geoinformatics (MCG)**

#### Coordinator; Prof. K. C. Tiwari (Civil Engineering)

Delhi Technological University, recently accredited with 'A' Grade by NAAC and ISO 9001:2015 certified, is one of leading engineering institute of India with over 80 years of glorious tradition behind it. Geoinformatics is describe as the science and technology dealing with the structure and character of spatial information, its capture, classification, quantification, storage, processing, portrayal dissemination and etc. including the infrastructure necessary to secure optimal use of this information. Multidisciplinary Centre for Geoinformatics (MCG), Delhi Technological University is working with the vision to be a world class Multidisciplinary center in the field of geospatial and Geoinformatics education, research and consultancy.

#### **Second United Nations World Geospatial Information** Congress (UM-WGIC) Online **Pre-Events**

The first United Nations World Geospatial Information Congress was organized in China in 2018. Second congress is decided to be held in Hyderabad, India druing 10th - 15th October, 2022. Prof. K. C. Tiwari is

member of National Organizing Committee.

As part of run up the main event to October. 2022. department of Science and Technology, Government of India conducted several Pre-Events for creating



awareness and for content building. The first Online Pre-Event jointly organised by Delhi Technological University, Delhi and Jawaharlal Nehru University, Delhi during 17<sup>th</sup> - 18<sup>th</sup> February, 2022; wherein a large number of Govt., Industry, Academia and Schools participated in the event.



## **Three-days Online International** Workshop on "Role of Early Warning System in Geo-**Meteorological Hazards Risk** Reduction" was held during 8<sup>th</sup> - 10<sup>th</sup> December, 2021

Multidisciplinary Centre for Geoinformatics, DTU organized a three-days Online International Workshop on "Role of Early Warning System in Geo- Meteorological Hazards Risk Reduction" during 8th - 10th December, 2021 in collaboration with -

- Commission on Education and Outreach, International Association of Seismology and Physics of the Earth's Interior (IASPEI).
- South Asia Alliance of Disaster Research Institutes (SAADRI),
- National Science and Technology Center for Disaster Reduction (NCDR), Taiwan,
- National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Govt. of India.

The aim of the workshop primarily was to provide opportunities to early career researchers, faculty members, makers and other stake-holders to enrich their knowledge, teaching skills and research in the field of early warning and geo-meteorological hazards risk reduction. The workshop was attended by 264 early career researchers, professionals and stake-holders from 10 countries. The workshop experts were from Norway, Taiwan, Nepal, Canada, India, Italy, Mexico and United Kingdom.



## **Geo-Innovation Challenge: Geospatial Science and** Technology in Defence, **Security and Intelligence**; 6th - 8th December, 2021

A Geo-innovation challenge funded by department of Science and Technology, GOI, India was conducted online during 7<sup>th</sup> - 9<sup>th</sup> February, 2022. The program involved submitting innovative Geospatial Technologies based innovative proposals relevant to Defence, Security Intelligence. A total of 24 proposals were received. Five different committees were constituted, which examined 5 proposals each in the FN session (7th, 8th, and 9th

February, 2022) and in AN session (7th and 8th February, 2022). The Committee consisted of an eminent Professor from IIT/JNU, a member from Research lab, a member from Industry and a member from Defence Services. Each participant given 30 minutes to was present. Eleven proposals shortlisted were and given to the committee. Three shortlisted candidates were awarded ₹ 12000/-, ₹ 8000/- and ₹ 5000/-.



## Winter School in Geospatial Science and Technology (Level 1); 15<sup>th</sup> November, 2021 to 9<sup>th</sup> December, 2021

department Science The of and Technology, Government of India funded 21 Days Geospatial Science and Technology (Level 1) program was conducted from 15<sup>th</sup> November, 2021 to 9th December, 2021 under the aegis of Multidisciplinary Centre for Geoinformatics. The program was attended by a total of 27 faculty members (Assistant Professors) from across the country. Due to Covid constraints, the program was held Online. A total of seven instructors drawn from DTU Faculty, Ph.D. and M.Tech. students from MCG were deployed to conduct the course. Certificates were issued to 24 successful candidates.





#### Ph.D. Degree Awarded

Ms. Shalini Ghakhar successfully defended her Ph.D. thesis under the guidance of Prof. K. C. Tiwari, MCG, DTU and was awarded Doctoral Degree.



ज्ञागिकी कि

## M.Tech. Degree Awarded

Mr. Vivek Anand. Mr. Vishal Shukla and Ms. Sushmita Gautam were awarded Masters the of Technology Degree in Geoinformatics. Mr. Also, Vivek awarded Anand with VC's Gold Medal.



## **Completed/Ongoing Proposals**

**Project Title-**Pan India Networked Institutional Support for Post Covid Revival of Socioeconomic Activities in Agriculture and Construction Sectors

Funding Agency - DST

Value- ₹28,49,990/-

Status/Period - In Progress (2021-22)

Brief Summary - Resources of human interest and survival are not necessarily evenly distributed on the surface of earth. Therefore, the humanity and the Civilizations usually develop where there is greater concentration of resources of human interest and survival. There is continuous migration towards areas with resources of human interest, comfort, survival and security. Any natural or human activity/endeavor that creates greater human interest, comfort, survival and security often invariably results in migration and concentration of humans around these places. Industrial revolution was one such human endeavor which resulted in development of Centers of greater human comfort and security, which came to be known as towns and cities. These industrial cities and towns provided reasons for migration and concentration of human populace in these cities. At the same time, nature also provided many activities through natural disasters, epidemics, endemics and pandemics etc. that caused permanent or temporary reverse migration. This project proposal seeks to mitigate the problems of migrants who returned to their native places and are now seeking jobs.

Project Title - Natural and manmade disaster risk reduction cloud burst, glacial lake outburst flood (GLOF) and flash flood studies.

Fellowship - Himalayan Research Fellowship.

**Funding Agency -** National Mission Himalayan Studies (NMHS), G.B. Pant National Institute of Himalayan **Environment and Sustainable Development** (GBPNIHESD) Kosi- Katarmal, Almora -263643, Uttarakhand, India.

Value- ₹ 35,43,408/-

**Brief Summary -** Sustainable Developments in the Himalayan Region.

**Publications:** In progress

Major Highlights/Objectives - Generation and Analysis of the data of selected region of Western Himalaya to identify the potentially dangerous and vulnerable glacial lakes susceptible to outburst and predict the consequences of the GLOF.

Progress: Completed in 28th November, 2021.

Project Title - National Geospatial Chair Professor Scheme.

Funding Agency - DST

Value- ₹ 35,00,000/-

**Brief Summary -** This project aims to:

- Guide in development of the National Geospatial eco system.
- Provide innovative ideas for implementation of the national geospatial policies and programmes.
- Propagate Geospatial Technologies in Academia, Government departments, Research Centers & Industries etc.
- Evolve/co-ordinate network projects
- Evolve/involve in Capacity Building and training programs for Human Resource Development in different areas of Geospatial Science & Technology.
- Motivate & quide prospective investigators to formulate research projects.
- Guide/co guide/ Supervise Masters/ Doctoral research students.

 Publish research papers, Books & Manuals etc., to popularize Geospatial Technologies among general public.

**Publications:** In progress

Major Highlights / Objectives - Outline proposal for standardization of National Geospatial Education, Development of national geospatial science, technology entrepreneurship and programmes, Establishment of a Geospatial Centre at DTU, Establishment of a Geospatial Centre at DTU, Commencement of a multidisciplinary M.Tech. program in Geoinformatics and its Applications, Conduct of Training/workshops on Geospatial Intelligence for Defence Services/CRPF/ Police Services.

Progress: Extended till March, 2023

#### Commendable Research Award

Prof. K. C. Tiwari, Dr. Shalini Gakhar and Dr. Dwijendra Pandev received Commendable Research Award for Excellence in Research, DTU, Delhi on 3<sup>rd</sup> March, 2022.





#### **Achievements**

MCG's student, Ms. Chhavi Tomar won silver medal at IIT, Kanpur in 800m (women).



# 5.11 Entrepreneurship Development Centre (EDC) Organisation Structure:

Name	Designation
Dr. Pushpendra Kumar	Coordinator
Dr. Punit Kumar Arora	Member

Entrepreneurship Development Centre at East Campus, is a centre of excellence providing single point facilities to budding entrepreneurs of the DTU east campus. The aim of the Centre is to develop institutional mechanism to create entrepreneurial culture and to foster the entrepreneurship and knowledge enterprise development for wealth and employment creation by community members.

- Incubation Centre with running five incubation start-ups under DTU-IIF, awarded grants, from the pipeline of ventures created through the MBA-IEV program.
- Conducting the MBA (IEV) and MBA (FBE) Programs, reviewing curriculum and pedagogy for maximum impact on entrepreneurship efforts of students
- Expanded mentorship program with entrepreneur/industry people, for domain based as well as full cycle mentorship, with panel of over 10 mentors, six engaged directly in teaching-learning workshops and mentoring.

- 4. More than 40 workshops for budding entrepreneurs in the campus, including skill development, experiential learning programs for MBA-IEV
- 5. Two workshops offered under the IIC program, with around three hundred registrations.
- Students, scholars and Consultant, EDC mentored ventures of school students under the prestigious Master Blaster program of entrepreneurship mindset curriculum for Delhi Government. The next round is also closely associated with the EDC.
- 7. First batch of MBA IEV students graduated, where one student joined IIM Lucknow Incubator as Manager Finance, two others joined prestigious Ph.D. programs, and remaining students all have running ventures earning revenue. Two are DPIIT recognized ventures in technology, one more is based on manufacturing and quality certification-based business, one in digital space and rest in services industry.
- First batch of MBA-FBE also graduated successfully, with several new ventures at pre-incubation to running venture stages. Second batch also some ventures in place.
- Second batch of MBA-FBE graduated successfully with new ventures at preincubation to running venture stages. Few of them are working in industry,

## 5.12 Equal Opportunity Cell

The Equal Opportunity Cell of DTU is set up 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.

## **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 mobilise 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 centre for students belonging to the marginalized sections, especially with regard to academic, financial and social matters.
- To help and develop a cordial interpersonal relationship among students and between teachers and the students from marginalized sections for academic interaction and extra- curricular activities; by sensitising the teaching and other staff.
- To promote a social and psychological environment to raise awareness on 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.

## **Organisation Structure:**

Name	Designation
Prof. Rachna Garg (Electrical Engineering)	Director
Prof. T. Vijay Kumar	Additional
(Civil Engineering)	Director
Dr. Geeta Singh	Assistant
(Environment Engineering)	Director
Ms. Minni Jain	Assistant
(Computer Sci. & Engg.)	Director

## **Important Activities:**

- Half day workshop on "Yoga cum Meditation program for mental health of Women and Persons with Disability" on 3<sup>rd</sup> June, 2022, Edusat Hall, EED.
- To celebrate International Women's Day, a lecture on, 'Professional Diaries: Powering through Transition' by Ms Chetna Mahajan has been organised in online mode on 8<sup>th</sup> March, 2022.
- A lecture on "Women in Corporate World-A freewheeling conversation" by Ms Kankana Karkun has been organised on 18<sup>th</sup> January, 2022 in online mode.
- Online session on Equal Opportunity Cell on 22<sup>nd</sup> December, 2021 for newly admitted UG students during Student Induction Program 2021 (Speaker: Prof. Rachana Garg).
- WIE Affinity Group Delhi Section in collaboration with Equal Opportunity Cell DTU successfully hosted "WIEALTH", a 20<sup>th</sup> webinar related to women's health and diet on 20<sup>th</sup> Nov, 2021 at 12 noon in online mode. 43 enthusiastic students

(consisting of 5 male and 38 female students) attended the session to learn from the distinguished speaker, Dr. Reena Arora.



## 5.13 Centre of Excellence for **Electric Vehicles and Related Technologies (CoE for EVRT)**

#### **Organisation Structure:**

Member	Designation
Prof. Madhusudan Singh	Coordinator
Prof. Pragati Kumar	Co-Coordinator

The University has established Centre of Excellence for Electric Vehicles and Related Technologies (CoE for EVRT) to impart training & research in thrust area of Electric Vehicles and Related Technologies. The Centre will help in developing an ecosystem for transformation from a traditional to eco-friendly transportation system. Stateof-the-art facility for training & testing of EVs will be created to carry out interdisciplinary research in Electric Vehicles and associated areas.



This Centre was inaugurated by the Hon'ble Vice Chancellor Prof. Yogesh Singh, DTU on 7<sup>th</sup> October, 2021. It is jointly funded by Delhi Knowledge Development Foundation (DKDF), Govt. of NCT of Delhi and Delhi Technological University, Delhi.

CoE for EVRT focused research areas includes, but not be limited to design, development, and analysis of electric vehicle motors and drives, charging station infrastructure, charge controllers, retrofitting communication infrastructure for information dissemination between the power grid and EVs, battery management systems and charging stations, etc. This Centre is not only providing interdisciplinary research and development ecosystems also offering internships, development courses, entrepreneurship programs and facilitating industrial trainings for undergraduate / postgraduate students and research scholars.



In addition, the Centre will also offer regular PG / Certificate courses from the year 2023-24 (tentatively). Further, the Centre has organized eight-weeks summer internship to students of various institutions during June-July, 2022. In addition, few Ph.D. scholars are already working on different research ares in the centre. The centre will strive for networking and collaboration with industries, research laboratories, and other institutions of excellence in India and abroad to carry out cutting-edge research and development in EVs, along with offering postgraduate programmes.

Many faculty members of the department of Electrical Engineering, DTU are already



working in different areas related to electric vehicles technologies through various sponsored research projects. These islands of research endeavors and the expertise of the faculty members involved in them is being gainfully collaborated for development of CoE for EVRT. In a very short span, the CoE for EVRT has established a strong industry- academia collaborations to achieve the objectives of the centre. The main focus of the centre includes:

- Design, development, and analysis of cost-effective and sustainable electric vehicles prototype.
- Design and development of battery packs and BMS for different types of electric vehicles.
- · Design, development, and analysis of electric vehicles motors and drives.
- · Design and retro-fitment of conventional vehicles to electric vehicles.
- Design and development of electric vehicles charging infrastructure and grid management.
- To offer M.Tech. and Ph.D. programs in the area of electric vehicles technology.
- To offer internship opportunities to the 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 electric vehicle technology.



#### **Key Achievements and** Infrastructure

A dedicated three storey building with built up area of 3357 sq. ft. is constructed in Electrical Engineering Department of DTU for the centre. The ongoing research projects at the centre include retrofitting work in IC engine-based vehicles (Development of Electric Kits)

- Development of Motor Drives and Controller for EVs
- · Development of Battery Management System (BMS)
- · Development of EV Chargers and Converters



For research and development activities necessary Test Equipments have been procured in the centre. Also adequate technical manpower for research and development activities are engaged and working on different projects in the centre. The center is signing MOUs with leading EV manufacturers/start-up for commercialization of EV products through technology transfer agreements.



## **Capacity Building Activities**

department organized one day workshop on Electric Vehicle Infrastructure on 2<sup>nd</sup> June, 2022 for familiarization of EV Technology. In this workshop more than 300 candidates participated from industry and academia. Also, summer internship was conducted on Electric Vehicles Technology from 23<sup>rd</sup> May to 22<sup>nd</sup> July, 2022 for students of diploma and engineering institutions of Govt. of NCT of Delhi. Eleven students completed their one month internship in the centre.

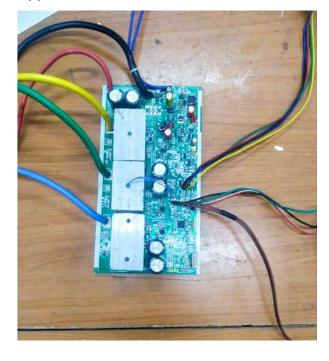


Retrofitting of 2-wheeler Vehicle

Design, Development, Testing and Field **Deployment of BLDC Motor Controller for** E-Rickshaw



Controller Circuit **Board** Developed for E-Reckshaw and Tested for Field **Applications** 



5. CENTRES AND OTHER UNITS

## 5.14 Centre of Excellence for The Science of Happiness

of The Board Management Delhi Technological University in its 44<sup>th</sup> meeting held on 31st August, 2021 has approved the establishment of "Centre of Excellence for the Science of Happiness".

The basic aim of this Centre of Excellence is to "develop high standard of research and in the area of happiness", with the main objective of stimulating the existing ecosystem of body, mind and energy with more general social objectives, corporate strategyculture seamless integration or regional development to enhance happiness with scientific touch.

The vision and Mission of the centre is as follows

#### Vision:

To promote the science and art of happiness scientifically through education, research activities, collaborating with industry and other stakeholders.

#### Mission:

- · Harnessing continued happiness and harmony under all circumstances.
- · Execution of various measures in the domain of well-being, happiness and spiritual awareness leads to evolution.
- · Developing innovative tools for personal and Organizational growth with the help of researchers from academic spiritual organisations.
- Imbibina and Nurturing nobleness. compassion, loyalty and good interpersonal relations with love and gratitude.

The main focuses of the centre are

- To learn and develop best practices which promotes happiness, thereby broadens view of intellectual, social and economical resources.
- To encourage the youth to serve the deprived and guide the weaker section of the society towards self- sustainability.
- To attempt and develop the "Science and Art of Happiness" through interdisciplinary approach and collaboration.

To develop an "Inner-Research and Development Program" to make education, a joyful one.

This centre of excellence for Science of Happiness is the brain child of Sh. Satinder Singh Rekhi who founded "R Systems" in 1993. These centres are already functional in IIT Kharagpur, California State University, Sacramento & Amity University, to add science and spirituality to bring more meaning and purpose to human life. The centre also receives financial support from Rekhi foundation through MOU.

#### **Organisation Structure:**

#### **Governing Body Members-**

Name of Member	Designation
Prof. T. Vijaya Kumar	Coordinator
Dr. P. K. Goyal	Co-Coordinator
Dr. Jagvinder Singh	Member
Dr. Parnita Sinha	Member
Dr. Goonjan Jain	Member
Dr. Mukhtiar Singh	Member
Dr. Loveleen Gupta	Member

#### **Adjunct Faculty Member:**

· Dr. S. S. Rekhi

#### **Governing Body Members-**

- Vice Chancellor or his Nominee
- Prof. Manas K. Mandal, IIT Kharagpur
- · Prof. Rahul Garg, IIT Delhi
- · Prof. S. Indu
- · Prof. Girish Kumar

#### **Activities Undertaken:**

A new FEC 58 "Introduction to Science and Practice of Happiness" has been introduced.

Attended workshop on "Teaching the Science of Happiness: Pedagogical Explorations and Reflections" during 14th- 16th May, 2022 at IIT Kharagpur.



## **6 Alumni Contribution**

The link between DTU and its alumni is deep and well-established. DTU endeavours to develop new chances for its students while promoting alumni links with their alma mater. In the face of an extraordinary crisis, the generosity of alumni has been remarkable. During different semesters of their academic experience, DTU students have access to a variety of scholarships that were founded with the support of alumni. The following scholarships were newly founded and awarded during the ninth convocation in 2022:

## **Organisation Structure:**

Name	Designation
Prof. Rajesh Rohilla (Electronics & Comm. Engg.)	Dean
Prof. Yasha Hasija (Biotecnology)	Associate Dean

S. No.	Name of the Scholarships				
1.	Hari Johri Scholarship				
2.	Leelawati and Mangat Ram Soni Scholarship				
3.	Scholarships initiated by Sh. C. P. Nehra Sh. Brijlal & Smt. Prakashwati Nehra Scholarship for Mechanical Engineering. Colonel Vidyasagar and Smt. Vimla Devi Nehra Scholarship for Civil Engineering. Sh. Narendra Kumar and Smt. Manju Nehra Scholarship for Electrical Engineering.				
4.	Dr. Alok Goyal Scholastic Award for Academic Excellence				
5.	Group of Best Friends-2005 Scholarship				
6.	Sh. and Smt. Laxmi and Raj Mrig Scholarship				

Name of the Scholarships (Not Given in the material

#### **Donation:**

 Sh. C. P. Nehra donated \$13,000/towards DTU medals and Scholarships on 20<sup>th</sup> September, 2021.

- Dr. Alok and Smt. Gopina Goyal donated
   ₹ 5,00,000/- for DTU medals and Scholarships.
- Sh. & Smt. Laxmi and Sh. Raj Mrig donated ₹ 5,83,070/- for DTU medals and Scholarships.

#### **Events:**



 Alternate careers for engineering graduates:

A webinar on "Alternate careers for engineering graduates" was organized on 29<sup>th</sup> August, 2021, during which alumni discussed alternative career options with students. Following speakers were present:

- Sh. Arun Goyal, Member-CERC & Former Secretary (Coordn), Cabinet Secretariat.
- Sh. Karnal Singh, Former Chief of Enforcement Directorate (ED)
- Sh. B Anant, Independent Consultant & Former Head (HR) ICICI Bank.
- Dr. Muktesh Chander, Spl Commissioner (Operations, Licensing & Traffic) DP.

- Prof. Sagar Maji, Director, DIET
- Sh. S. M. Mahajan, Former ED-BHEL

## How to prepare for and crack the civil service test:

A live webinar on "How to prepare for and crack the civil service test" was held on 23<sup>rd</sup> October, 2021, during which successful DTU alumni shared their preparation experiences for the UPSC civil service exam with the students. Following alumni were present on the panel:

- Sh. Karnal Singh, Former Chief of Enforcement Directorate (ED)
- Sh. Sanjay Diwan, Ex. President, DCE DTU Alumni Association.
- Ankita Jain, AIR-3, DTU 2014
- · Gaurav, AIR 13
- Nisha, AIR- 117, DTU 2020
- Shakti, IRS-2020
- Arun Gupta, Siemens Energy

My Story: Motivational Session with Successful Entrepreneurs and Start-up Founders:



An online webinar on "My Story: Motivational Session with Successful Entrepreneurs and Start-up Founders" was held on 25<sup>th</sup> November, 2021, to engage students and alumni in a discussion about their start-up ventures and increasing entrepreneurial awareness. Following speakers were present:

- Sh. Praveen Sinha, Managing Director at PinCap, Co-Founder, JABONG.
- Sh. Sandeep Dalmia, Co-Founder, Stanza Living.

#### **Book Launch of 2022:**





The book titled "The class of 2006" authored by DTU alumnus Sh. Akash Kansal was launched on 30<sup>th</sup> January, 2022, in the presence of movie superstar, Sh. R. Madhavan. The Class of 2006 is a light-hearted, gripping college drama set during 2006 - 2010. It talks about the story of 18-year-old Engineering Student - Rahul, a small-town boy and an introvert who cracks into one of the best engineering colleges in India. Now

his only ambition was to fulfil his family tradition, finish top of the class and make his parents proud.

## Alternate careers for engineering graduates:

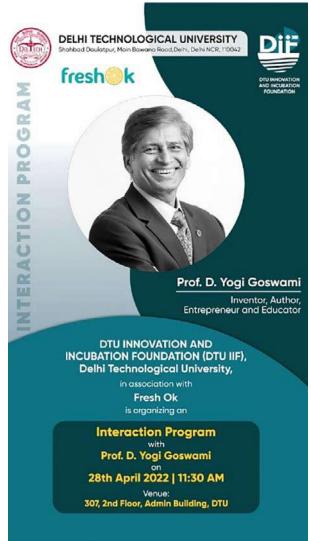
A webinar on "Alternate careers for engineering graduates", was held on 22<sup>nd</sup> March, 2022, during which alumni discussed alternative career options with students. Following speakers were present:

- Prof. J. P. Saini, Hon'ble Vice Chancellor DTU & NSUT, Delhi
- Sh. Sant Bhushan Lal, Arbitrator Valuer & Consultant
- Sh. Sanjay Puri, IRS Chief IT Commissioner
- Sh. Dinesh Bhatiya, IFS, Indian Ambassador to Argentina & Uruguay
- Dr. Muktesh Chander, Spl Commissioner (Operations, Licensing & Traffic) DP.
- Prof. Rajesh Rohilla, Dean Alumni, Affairs, DTU
- Sh. S. M. Mahajan, Former ED-BHEL
- Sh. Varun Tangri, MD & CEO QueueBuster



#### Interaction with Prof. D. Yogi Goswami.

An interaction program with Prof. D. Yogi Goswami was organized on 28<sup>th</sup> April, 2022 for students by the DTU Innovation and Incubation Foundation (DTU IIF) in association with the office of Dean Alumni office DTU. Prof. D. Yogi Goswami, Alumnus of DCE now DTU, is a U.S. inventor, entrepreneur, author, and educator. He has few times advised the U.S. Congress on energy policy and the transition to renewable energy. Prof. Goswami is a Distinguished Professor and the director of the Clean Energy Research Center at the University of South Florida.



#### Meeting with Alumni of 1971 & 1972 Batches.

The Deans of DTU hosted and honoured of 1971 Alumni 1972 Batches on 27<sup>th</sup> July, 2022. Discussion regarding celebration the the Golden Jubilee Homecoming Meet was done and suggestions were taken from the alumnus.





## **Outreach and Extension Activities**

Board of Management in its 27th meeting on 23<sup>rd</sup> February, 2018 has approved the establishment of Center for Extension and Field Outreach at DTU. The role of the center is to extend knowledge and other institutional resources to the community and vice-versa and to gain insights from a contact between knowledge resources and socio-cultural realities with a view to reflecting these in the entire curricular system of higher education including teaching and research. It will be a twoway process between the experts and the people, an intellectual intervention in the community's living problems which need to be overcome through an educational process. It was to be that education which helped students to face life and its challenges and which created an ambience for a learning society.

## **Organisation Structure:**

Name	Designation
Prof. A. K. Srivastava (Civil Engineering)	Dean
Prof. Nitin Puri (Applied Physics)	Associate Dean

#### AIM:

To promote a meaningful and sustained rapport between the university and the community.

## **Objective:**

- extend knowledge and other institutional resources to the community and vice-versa.
- To gain insights from a contact between knowledge resources and socio cultural realities with a view to reflecting these in the entire curriculum system of higher education including teaching research.
- To provide two-way process between the experts and the people.
- To provide an intellectual intervention in the community's live problems.
- To promote the philosophy of extension and outreach as a part of total education program.
- · To reach out to larger section of community specially deprived groups through extension.
- To enrich the learning process of faculty and students mainly through extension activities.
- The interest of the students should be considered for academic credit (1 or 2) in addition to or as a part of their regular course of studies.

## **Broad Categories of Program:**

- Services to Schools and Colleges
- Services to the Community
- Services in the University Campus

Number of awards and recognition received for extension activities from Government/ recognized bodies:-

Name of Activity	Name of the Award/ recognition	Name of the Awarding government/ recognized bodies	Year of Award
Project "Desh ke Mentor"	Award of ₹ 2.17 Cr.	Directorate of Education, Govt. of NCT of Delhi	2021
Recruitment of Senior Fellows, Fellows, Associate Fellow and Consultants for Delhi Jal Board	₹ 7,21,842/-	Delhi Jal Board	January, 2022
Lab on Wheels (Paytm)	₹ 1,57,20,000/-	M/s Paytm	Under progress

Average Percentage of students participating in extension activities with Government Organizations, Non-Government Organizations and programs such as Swach Bharat, Aids Awareness, Gender issue etc.

• FEC-52 124 USIP DTU interns 03 USIP Lab on wheels interns 69 • Internship program with Delhi Police 02

 Mentors 7500 students mentoring

30000 Schools students (mentees) under the project Desh ke Mentor

 Average percentage of students' participation In extension activities 54.67%

## 8 International Affairs

#### Admission 2021-22

In the academic year 2021-22, the Office of International Affairs, DTU has admitted foreign national students from approximately 33 countries.

## **Organisation Structure:**

Name	Designation
Prof. Vishal Verma (Electrical Engineering)	Dean
Prof. Roli Purwar (Applied Chemistry)	Associate Dean

## **Total Foreign National Student Admitted in Academic Year 2021-22**

Program	DA	SA	ICC	CR	DTU Portal SII			Total		<b>Total Admissions</b>	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
UG	45	09	58	10	03	-	-	-	106	19	125
PG	-	-	15	05	-	-	-	-	15	05	20
Ph.D.	-	-	07	02	-	-	-	-	07	02	09
	45	09	89	17	03	-	-	-	137	26	154

## **Details of Program Organized by Department of International Affairs:**

S. No.	Program	Details of the Program	Date
1.	Orientation Program for foreign students admitted in August, session 2021	Virtual Fair to meet 35 Top UK Universities and get all the information students need about the upcoming student intakes and the various options of studying in the UK	21st August, 2021
2.	n+i webinar	Interaction with students for opportunities in France for final and Pre-final year students	29 <sup>th</sup> October, 2021
3.	Webinar for pursuing Masters in France, 2022 in association with Embassy of France	Interaction with students for opportunities in France for final and Pre-final year students	18 <sup>th</sup> February, 2022

## Visit of International Universities/Officials for the Purpose of Branding

S. No.	Name of the Visitor	Name of the University/ Organization	Date
	Dr. Ammar Abdulhamed Khader, Associate Cultural Attaché	Embassy of Iraq	30 <sup>th</sup> November, 2021

#### MoUs

Number of functional MoUs with institutions of national, international importance, other Universities, industries, corporate houses etc., during 2021-22

S. No.	Organization with which MoU is signed	Year of signing MoU	Duration	List the actual activities under each MoU year wise
1	Cabakkale Onsekiz, Mart University, Turkey	2021	5 years	Knowledge Sharing

#### **Internal Quality Assurance Cell** 9.

The Delhi Technological University, Delhi has emerged as one the premier Technological institutions of our great country 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, Delhi Technological University (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 a 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.

## Organisation structure

#### Chairperson

Prof. J. P. Saini, Hon'ble Vice Chancellor, DTU

#### Teachers to Represent All Level (Three to Eight) -Member

- Prof. Narendra Kumar, Dean Discipline & Professor, EED
- Prof. Neeta Pandey, Professor, ECE
- Prof. Rinku Sharma, Professor & HoD, AP
- Prof. Amit Mookerjee, Professor & HoD, USME
- · Prof. Gurjit Kaur, Professor, ECE
- Prof. Girish Kumar, Professor, MED
- Dr. Shilpa Pal, Associate Professor, CED
- Mr. Yashdeep Singh, Assistant Professor, DSM

#### One Member from the Management - Member

 Prof. I. K. Bhat, Member BOM, DTU & Vice Chancellor, Manav Rachna University, Faridabad.

#### **Few Senior Administrative Officers - Member**

- Prof. Madhusudan Singh, Registrar
- Sh. Kamal Pathak, Controller of Examination
- Sh. D. P. Diwedi, Consultant Finance & Planning

#### One Nominee Each from Local Society, Students and Alumni - Member

- Sh. Arun Gupta, Alumni, C-10/6, Ground floor, Near Vidhya Bharti School Sector-15, Rohini, Delhi
- Sh. Rutvik Warker (2K19/CH/09)
- Sh. Akhil Chaudhary, Founder Chairman Binary Semantics Ltd and CEO & Managing Partner, Vaco Binary Semantics LLP.

#### One Nominee each from Employers / Industrialists / Stakeholders - Member

· Smt. Seema Gupta, Director operation power grid corporation of India Gurugram

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

· Prof. Nirendra Dev, Director, IQAC

#### 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 programmes/activities of the university.
- Acting as a nodal agency of university for co-ordinating quality related activities, including adoption and dissemination of good practices.
- Development and maintenance institutional database through MIS for the purpose of maintaining / enhancing the institutional quality.
- Development of the Annual Quality Assurance Report (AQAR) of the university based on the quality parameters/ assessment criteria developed by the relevant quality assurance body (like NAAC, NBA) in the prescribed format.
- Bi-annual development of Quality Radars (QRs) and Ranking of Integral Unites of unversity based on the AQAR.
- · Interaction with SQACs in the pre and post accreditation quality assessment,

sustenance and enhancement endeavours.

## **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 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.
- Holding Management Review Meetings and updating the Quality System.
- 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 clarity and focus in Institutional functioning towards Quality Enhancement.
- Ensure Enhancement and Co-ordination among various activities of the institution and institutionalize all the good practices.
- Provide a sound basis for decisionmaking to improve institutional functioning.
- Act as a dynamic system for quality changes in HEIs.

#### **Activities Conducted during Current Academic Year**

- External ISO Audit was conducted during 11<sup>th</sup> - 12<sup>th</sup> October, 2021.
- Internal Academic and ISO Audit were conducted during 26th- 29th October, 2021.
- · Conduct of NBA team visit during 25<sup>th</sup> - 27<sup>th</sup> February, 2022. Three Production programs Engineering (Mechanical Engineering), Electronics & Communication Engineering (ECE), and Master of Business Administration (DSM) accredited with NBA for three years; till 30th June, 2025.
- Conduct of NBA team visit during 4<sup>th</sup> 6<sup>th</sup> March, 2022. One program Hydraulics & Water Resources Engineering (HWRE) Civil Engineering got accreditation for six years; till 28th October, 2028.
- 4<sup>th</sup> meeting of the IQAC was held on 31<sup>st</sup> March, 2022.
- IQAC collaborated with NITTTR Chennai to organize an FDP on NBA Accreditation Procedures in two phases (09th - 11th, May, 2022 & 6<sup>th</sup> - 8<sup>th</sup> June, 2022). The number of participants were 40 in each phase.
- External Academic Audit was held during 17<sup>th</sup> - 18<sup>th</sup> May, 2022 & 26<sup>th</sup> - 27<sup>th</sup> May, 2022.
- Conduct of ISO re-certification audit during 23<sup>rd</sup> - 25<sup>th</sup> May, 2022, leading to re-certification of the university with ISO 9001-2015 till 26th November, 2024.

- Organized earthquake community awareness program and mock drill in collaboration with National Disaster Response Force (NDRF) on 14th June, 2022.
- The AQARs for the academic year 2020-21 were submitted on the NAAC portal.
- Preparation and publication of annual report for the academic year, 2020-21.











#### **Industrial Research Development (IRD)** 10

The IRD department 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 department also coordinates the work of DTU research fellowship, given to different faculty members who do not have any external research funding. During the year 2021-2022, (305) research papers were awarded with the Research Excellence Awards under different categories. The researchers of DTU had published 903 research paper in various scientific Journals (474), Conference (405), Book Chapters (24) of repute. During 2021-2022, the faculty members has filed / published 8 patents.

## **Organisation Structure:**

Name	Designation
Prof. Ashutosh Trivedi (Civil Engineering)	Dean
Prof. Ruchika Malhotra (Software Engineering)	Associate Dean

## **Sponsored Projects**

S. No	Name of the Project	Name of the P. I	Agency	Govt/ Non- Govt.	Department	Year	Total Cost of the Project (in ₹)
1	PAN INDIA networked institutional support for post COVID revival of socioeconomic activities in agriculture and construction sectors	Prof. K. C. Tiwari	DST	Govt.	Civil Engineering	2021	₹ 28,49,990/-
2	Development of fault tolerant power converters for solar PV fed hybrid electric vehicles (PVHEVs)	Dr. Mayank Kumar	SERB	Govt.	Electrical Engineering	2021	₹ 31,48,810/-
3	Evaluation of effect of Macrophytes Based feed on the growth, gut physiology, expression of specific genes involved in the Biosynthesis of DHA and EPA and production Quality Freshwater fishes	Prof. Jai Gopal Sharma	DBT	Govt.	Biotechnology	2021	₹ 21,93,360/-
4	Design and Development of Reconfigurable Silicon Nanowire Schottky Barrier Transistors for Biosensor Applications	Dr. Sumit Kale	DST SERB	Govt.	Electronics & Communication Engineering	2022	₹ 29,65,325/-

## **Consultancy Projects**

S. No	Name of the P. I	Name of the Consultancy	Name of the Department	Date	Total Cost of the Project (in ₹)
1	Dr. Raju Sarkar	Job mix design of cement concrete M10 & M25	Civil Engineering	2021-2022	₹ 1,00,000/-
2	Prof. S. K. Singh	Regarding Third party quality audit for construction of various bus depots, delhi	Environmental Engineering	2021-2022	₹ 42,48,000/-
3	Prof. S. K. Singh	Third party quality audit bill and quantity of construction of building for printing press and skill development centre at B-81, Sector-80, Noida	Environmental Engineering	2021-2022	₹ 8,65,176/-
4	Dr. Ritu Raj	Quatation for non-destructive testing of R/wall (Construction/rectification of balance works/ left out works of leisure valley, Adarsh Awash Yojna on as is where basis at plot NO/Gh-02, sector-tech zone iv, Noida, U. P	Civil Engineering	2021-2022	₹ 1,18,000/-
5	Dr. Ritu Raj	Proof checking/structural vetting for design of proposed water tank	Civil Engineering	2021-2022	₹ 59,000/-
6	Prof. Nirendra Dev	Conducting the study on remodelling of Wazirabad Barrage and Administrative	Civil Engineering	2021-2022	₹ 45,00,000/-
7	Prof. Raju Sarkar	Preparation of Soil Investigation Report, Rishi Markendeshwar Engineering Consultant, Ranjeet Nagar, Shahbad Markenda, Kurukshetra, Haryana	Civil Engineering	2021-2022	₹ 59,000/-
8	Prof. Raju Sarkar	TPQA Audit of Road/Building works in the project of development of modern poultry market at IFC Gazipur	Civil Engineering	2021-2022	₹ 84,96,000/-
9	Dr. Ritu Raj	Materials testing work related to construction of setting up of semi-permanent/temporary I.C.U, Hospital, package-1	Civil Engineering	2021-2022	₹ 5,00,000/-
10	Dr. Ritu Raj	Proof checking/vetting of structures a. Community facilities at Shalimar Bagh b. 15 MGD Pumping station at Pappankalan and other structures mentioned (2) Construction of new academic block (G+3) with future extension of one floor at Lakshmi Bai College, Ashok Vihar, Delhi	Civil Engineering	2021-2022	₹ 1,85,000/-
11	Dr. Ritu Raj	Proof checking/vetting of structural design of RCC Building, overhead, underground water tank, DG and Oil tank foundation and DG Stack system, chimney structures and steel frames etc. (2) Proof checking work of CIF Building at NIPGR Campus, New Delhi	Civil Engineering	2021-2022	₹ 1,50,000/-

S. No	Name of the P. I	Name of the Consultancy	Name of the Department	Date	Total Cost of the Project (in ₹)
12	Prof. S. K. Singh	Development, rehabilitation/rejuvenation of trunk drain no.2 and trunk drain no.5 at Dwarka, New delhi under Nazul Agency	Environmental Engineering	2021-2022	₹ 61,50,000/-
13	Prof. A. Trivedi	Proof Checking MEP drawings for C/O Girls & Boys Hostel and site development at the campus of NIT Uttarakhand at Srinagar Garhwal (Phase-1) on EPX baiss	Swati Structure Solutions Pvt. Ltd.	2021-2022	₹ 1,18,000/-
14	Mr. Hrishikesh Dubey	Proof checking/vetting of RCC Jacking pipe design (2) Proof checking/vetting of structrual drawings and design of foot over bridge at Hindon samshan ghat	Civil Engineering	2021-2022	₹ 2,25,000/-
15	Prof. Raju Sarkar	Third party quality audit for SDMC, Najafgarh, Delhi-110043 (under MoU-1	Civil Engineering	2021-2022	₹ 4,71,000/-
16	Prof. Raju Sarkar	Third party quality audit for DAMB, Janakpuri, Delhi	Civil Engineering	2021-2022	₹ 40,000/-
17	Mr. Hrishikesh Dubey	Construction of hostel building of 240 single occupancy rooms (G+5 Floors) testing of design mix (M25, m30 and M35 concrete with PPC) 2. Vetting of structrual drawing proof check 100 beded ESIC Srinagar hospital 3. Vetting of structrual drawing for national company law tribuanal NCLT service apartment, Noida 4. Vetting of module mounting structure for solar photovoltic modules to be installed at Pusa, New delhi	Civil Engineering	2021-2022	₹ 6,25,000/-
18	Dr. Ritu Raj	Third party quality assurance Irrigation and flood control department	Civil Engineering	2021-2022	₹ 36,14,258/-
19	Dr. Ritu Raj	Third party quality assurance CPWD Central Vista project division-V, New Delhi	Civil Engineering	2021-2022	₹ 2,19,06,780/-
20	Dr. P. K. Goyal	Regarding design mix of M25 and M30	Civil Engineering	2021-2022	₹ 1,00,000/-
21	Mr. Hrishikesh Dubey	Vetting proposal for the proposed restrengthening work at FCI Headquarters	Civil Engineering	2021-2022	₹ 14,50,000/-
22	Prof. Raju Sarkar	TPQA for the work for A) Strengthening of road of major district road-138 from Mazara dabas mor to CRPF gate under Sub division NR-15, PWD Division north roads, delhi under sub division NR-13, North roads division, PWD, Delhi B) Strenthening of road of Bawana to Auchandi Border under Sub-division NR-15, PWD Division north roads, delhi under sub division NR-13, North roads division, PWD	Civil Engineering	2021-2022	₹ 3,99,230/- + ₹ 4,45,352/-

S. No	Name of the P. I	Name of the Consultancy	Name of the Department	Date	Total Cost of the Project (in ₹)
23	Prof. Raju Sarkar	Third party quality audit for the work improvement of various rooms, stair case, corridords etc in Najafgarh zonal office building, SDMC	Civil Engineering	2021-2022	₹ 39,830/-
24	Prof. Raju Sarkar	TPQA work for demolition and reconstruction of three storey harijan chopal at village rithala in rithala AC-06, Delhi	Civil Engineering	2021-2022	₹ 55,191/-
25	Dr. Ritu Raj	Vetting of structural drawing for Type 2, Type-3, Type-4, Type-5 quarters at leh for ITBP 2. Design mix concrete grade M-30 and M10 3. Proof checking of CGHS Wellness centre building at Paschim Vihar, Delhi 4. Road improvement programme in NDMC area-preparation of Job mix formula 5. Material testing of construction of mother and child block and screening of OPD Block at Dr. Baba Sahib hospital at rohini, delhi, Dr. Ritu Raj, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 5,30,000/-
26	Dr. Anup Kumar	Permission for conducting vetting of MEP Drawing for propsosed Gramin Bank at KG Marg, New Delhi, Dr. Anup Kumar Mandpura and Mr. Himanshu Singh		2021-2022	₹ 1,00,000/-
27	Dr. Ritu Raj	Material testing for the construction of SPS Class room in existing premises of Govt. School SKV No.2 Shakarpur (ID-1411030) Package-II, Dr. Ritu Raj	Civil Engineering	2021-2022	₹ 1,00,000/-
28	Prof. Raju Sarkar	TPQA Consultancy for DDA, Project divison-4, Jasola, New Delhi-110076, Prof. Raju sarkar	Civil Engineering	2021-2022	₹ 16,00,400/-
29	Dr. Ritu Raj	Material testing for the construction of Zoological Park at Puthur, Trichur, Phase-II, Dr. Ritu Raj, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 5,00,000/-
30	Dr. Ritu Raj	1.Vetting of structural drawings of the work "Additional terracing in staff block camp office at delhi 2. Material testing for construction of new semi-permanent structure (G+3) School 3. Baraeilly smart city "Design supply and construction of skywalk at patel chowk, Dr. Ritu Raj, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 2,13,000/-
31	Prof. Raju Sarkar	TPQA Services of CPWD, IP Bhawan, ITO, New Delhi	Civil Engineering	2021-2022	₹ 14,95,212/-
32	Prof. Raju Sarkar	Third party quality assurance consultancy of development of 81 Hect. Of land acquired recently in phase-IV and V, Sector-31 & 32 Rohini	Civil Engineering	2021-2022	₹ 69,264/-

S. No	Name of the P. I	Name of the Consultancy	Name of the Department	Date	Total Cost of the Project (in ₹)
33	Dr. Ritu Raj	Vetting of design of structure and foundation for roof-top/ground-based MW towers for 5G Network 2. Vetting of structural design and drawing of Shadra Drain word in Delhi 3. Design mix for construction of Pucca school building under PWD Delhi, Dr. Ritu Raj, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 5,27,120/-
34	Prof. Amit Kumar Shrivastava	Quality audit and technical advice of A/R and M/O completed scheme UER-1, II, II for the year 2021, Bitumnous concrete and road marking on 80M/R/W Road UER-III in Rohini Phase-IV and V from Prem Adhar to Mohd. Pur Majri Road, Prof. Amit Srivastava, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 2,90,523/-
35	Dr. Ritu Raj	Mix design of self-compacting concrete with fly ash for sturcture work 2. Vetting of structrual design and drawing of SPS School edu north division 3. GBT/RTT/RTP Tower foundation design and drawing proof checking/vetiing, Dr. Ritu Raj, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 2,50,000/-
36	Prof. A. K. Sahu	Regarding vetting of soil investigation report, Prof. A.K.Sahu, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 50,000/-
37	Prof. Raju Sarkar	Laboratory testing for quality of inter locking precast cement concrete blocks	Civil Engineering	2021-2022	₹ 60,000/-
38	Dr. Ritu Raj	Material testing for the construction of mother and child block at Dr. BSA Hospital	Civil Engineering	2021-2022	₹ 2,50,000/-
39	Dr. Ritu Raj	Material testing for the construction of multistoried building at Shahdra South zone, Delhi	Civil Engineering	2021-2022	₹ 2,50,000/-
40	Prof. A. K. Sahu	Vetting of soil investigation work	Civil Engineering	2021-2022	₹ 50,000/-
41	Prof. Raju Sarkar	Investigation and evaluation of various roads under division north west road-1, PWD for recommendation of rehabilitation/strengthening/resurfacing/recycling	Civil Engineering	2021-2022	₹ 1,60,000/-
42	Mr. Himanshu	Proof checking/vetting of MEP	Electrical Engineering	2021-2022	₹ 59,322/-
43	Prof. Raju Sarkar	TPQA Services for the work of construction of common central secretariat integrated buildings 1,2 and 3 in plot 137, New Delhi	Civil Engineering	2021-2022	₹ 3,45,89,975/-
44	Prof. S. K. Singh	Deed of declaration of plot no.GH-4 Sector-108, Noida	Environmental Engineering	2021-2022	₹ 2,00,000/-

S. No	Name of the P. I	Name of the Consultancy	Name of the Department	Date	Total Cost of the Project (in ₹)
45	Dr. Ritu Raj	Proof checking of design and details of steel structure elevated broad way 2. Design mix for construction of Pucca School building EDU(N) Divison, Dr. Ritu Raj, P.I	Civil Engineering	2021-2022	₹ 3,02,000/-
46	Dr. Ritu Raj	Proof checking of design and details of a. Residential and non-residential building at Leh, UT of ladakh b. Proof checking of structure audit work c. Skywalk at Mathura Road 2. Vetting of structrual design and drawing of seven Nos CM Rise HSS for MP Govt. Dr. Ritu Raj, P. I	Civil Engineering	2021-2022	₹ 6,30,000/-
47	Prof. Raju Sarkar	Quality audit and testing of materials for C&ND Road division (M-413) PWD, New delhi-110002, Prof. Raju Sarkar, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 8,75,364/-
48	Dr. Ritu Raj	Material testing and design mix for the construction of head quarter building for CBSE at Dwarka, Sector-23, Dr. Ritu Raj, P. I	Civil Engineering	2021-2022	₹ 2,00,000/-
49	Dr. Ritu Raj	Material testing and design mix for the construction of adaniconnex data center project arrow at Gautam buddh nagar, UP, Dr. Ritu Raj, P. I	Civil Engineering	2021-2022	₹ 8,00,000/-
50	Prof. Raju Sarkar	Third party quality audit for DMC, Ambedkar stadium, Delhi Gate, New Delhi-110002 under MOU-3, Prof. Raju Sarkar, P.I, Department of Civil Engineering	Civil Engineering	2021-2022	₹ 60,457/-

## 11 Student Societies

The student activities are the essence in students' life while in the university campus. Delhi Technological University offers a large number of extracurricular activities and a student can find an interest group corresponding to almost any extracurricular activity. The Dean Student Welfare Office facilitates the students to undertake various activities of their interest. The entire work of student activities is being governed by various provisions of the Act, Statutes, Ordinances and Rules & Regulations made therein by the authorities of the DTU established by Govt. of NCT of Delhi vide Act 6 of 2009.

## **Organisation Structure:**

Name	Designation
Prof S. Indu (Electronics & Comm. Engg.)	Dean
Prof. Ram Singh (Applied Chemistry)	Associate Dean

The University provides travel grant to students for participating in events like Hackathon, MUN, important meetings (other than innovative project competitions). The event must have participation from reputed academic institution. The University provides 50% airfare, visa and registration fees subject maximum of ₹ 75,000/- per student for an international event and ₹ 25000/- for national event. Maximum number of students attending an event is two only. This facility is given only for once during the period of course of the participant.

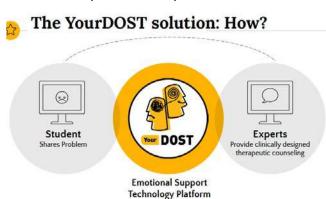
#### **DTU Mitra**

The DTU Mitra Helpdesk is an information dissemination center functioning under the office of DSW where students can submit his/her queries. The helpdesk forwards the queries raised by the students to the respective branch.

#### **Association with YourDost**

Founded in 2014. YourDOST is an award-winning online counselling and emotional support platform designed to foster mental wellness. It anonymously connects users with the right expert from a pool of psychologists, psychotherapists, counsellors, life coaches and career coaches who understand and guide the users through completely confidential individual sessions. This organization is equipped with the technology to immediately connect the users to one of the 900+ certified experts available on the platform. Through a completely anonymous method of interaction, the user's personal identity is protected.

DTU has signed MOU with this organization to take care of the mental and emotional well-being of the DTU staff and students. During last year, this platform has given 1354 counseling sessions of about 29 minutes of average duration each to the students as per their requirements.



11. STUDENT SOCIETIES

## Name of Societies/Councils/Students Chapters/Clubs:

S.	Societies/Councils/Students		
No.	Chapters/Clubs:		
1	ACS-Student Chapter		
2	BHANGRA		
3	TATVA		
4	DTU - NSS		
5	SAHITYA		
6	VIBE		
7	YUVAAN		
8	SCEE		
9	D_CODER		
10	ASSETS		
11	IEEE		
12	E - CELL		
13	Nrityangana		
14	IGTS- DTU		
15	Panache		
16	Round Table		
17	Pratibimb		
18	Kalakriti		
19	DTU - Super mileage		
20	Team Raftaar		
21	Codechef DTU		
22	SR DTU		
23	180 Degrees Consulting DTU		
24	SAE-DTU		

S. No.	Societies/Councils/Students
25	Chapters/Clubs: QUIZ CLUB
26	YES + HAPPINESS
27	INNOVA DTU
28	IOSD PARCHUAY
29	PARCHHAYI
30	SITE
31	CSI-DTU
32	SSE-DTU
33	CURIE Research Promotion Society
34	Madhurima - The Music Society
35	ENACTUS
36	GYI
37	DEBATING SOCIETY
38	Cosmology Club
39	DTU Consulting Group
40	NCC
41	LET' TALK
42	QUAD -DTU
43	Film Club
44	DELTECH MUN
45	IAStructE DTU Student Chapter
46	Cultural Council
47	DTU Sports

### 11.1 Cultural Council

The DTU Cultural Council promotes cultural diversity and inclusion which values its teams and perspective. The purpose of the DTU Cultural Council is to coordinate with all the cultural societies and organize several cultural events throughout the year like Freshers' Fiesta, Farewell, Jasn-e-Azadi and Homecoming with the main goal being Engifest. The Cultural Fest of DTU. The Council aims to take these events to greater heights holistically and add new flavors to them, assuring to keep the cultural aura of the university maintained without affecting its technical integrity. It provides complete support to all societies and works with them in synergy throughout the year.

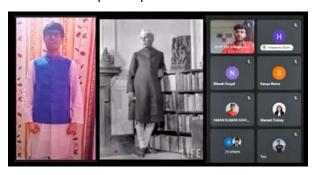
## **Events Organized**

#### JASHN-e-AZADI



Jashn-e-Azadi was a one-day event organized by the Cultural Council on 14<sup>th</sup> August, 2021. It was hosted to celebrate the occasion of India's 74<sup>th</sup> Independence Day completely remote and streamed live on YouTube keeping in mind the covid

guidelines. The entire event lasted for over 3 hours with some heart-warming performances by DTU cultural societies and over 50 participants across India.



#### **ALFAAZ, THE POETRY COMPETITION:**

The competition consisted of participants in English and Hindi poetry recitation competitions. It was judged by Ms. Vaishnavi N, a prominent professor of law. The top 3 contestants were awarded certificates among over 30 participants.

#### **AARAMBH 2022**



Aarambh was a three-days orientation organized by the Cultural Council on 21<sup>st</sup> January, to 23<sup>rd</sup> January, 2022. We instituted orientation for incoming students of DTU to ease the transition into our university. It was a way for students to meet other students,

become familiar with campus services and get to know about Cultural Societies through individual presentations.

#### FRESHERS' ORIENTATION

#### Day-1

The event included presentation from all the cultural societies of DTU:

- NRITYANGANA Indian Dance society
- VIBE- The official Street dance society
- MADHURIMA The Music society
- PANACHE Fashion society
- SAHITYA The Literary and Debating society
- KALAKRITI The Creative Art society
- PRATIBIMB The Dramatics and Filmmaking society
- DTU BHANGRA Folk Dance society

The EMCEE team of DTU started the event by interacting with students through "getting to know sessions", information sessions and advising sessions. These sessions familiarize students with university policies, general rules and honor codes. During the event we provided incoming freshmen with information about Cultural Societies and other organizations via presentations and past performances.

#### Day-2 & 3 [Fresher's Fiesta]

Freshers of the 2021 batch were welcomed with a perfect online orientation and fresher's including various trivia's and games. It was a perfect start for the journey of the new batch of students as it consisted of a plethora of events and activities for them. One of the main purposes of conducting this event was to welcome new students into the university's atmosphere and to encourage their participation in cultural activities.

#### **HOMECOMING 2022**

After 2 years of lockdown, "Homecoming" was the first offline event organized by the Cultural Council, in the whole Delhi NCR. From art exhibitions to hosting a number of exciting events throughout the day and night to ensure that these dates were unforgettable for every student, Homecoming was one of its first kind.

Timeline: 22<sup>nd</sup> - 23<sup>rd</sup> February, 2022.

#### **DAY-1 (Comedy Night)**

The event started with informal events like Tug-of War, Treasure Hunt inspired by the famous Netflix web-series Treasure hunt





and art-exhibition by Kalakriti. The entire day consisted of performances by our very own college students and societies Vibe, Nrityangana and Pratibimb.

The first night was a captivating comedy performance by Hemant Kumar and Harsh Gujral at the OAT. The venue was jam packed with students who laughed along the jokes of the spellbinding performers.



#### **DAY-2 (Band Night)**

The band night witnessed performances beguiling from Navjot Ahuja and Udbhav at the OAT. The venue brimmina was with students who sang along with the enrapturing performances. The crowd was enthralled after performances the and enchantments of once more were echoing in the whole OAT.

## 11.2 Sports Council

Physical education & sports activities play an essential function in accomplishing the aims and targets of Education. The students of DTU are supplied with highquality centers and are encouraged to participate in the tournaments held in and around N.C.R. Delhi, particulars, and engineering institutions.

DTU is having 450 m. track, ground for Football, Hockey, Cricket, two courts for Volleyball, two courts for basketball, three courts for Tennis and five courts for Badminton. Table Tennis rooms. Chess Rooms, Carrom Rooms and Gyms are also available in each hostel of the college campus. With the view to understand upcoming proficient sportsman and sports woman in the college, the Sports Council organizes sports activities competition ARENA. The competition witnesses the large participation of boys and girls which included athletics, badminton, table tennis, basketball, carrom, chess, cricket, tennis and volleyball. Prizes and certificates have been offered to the winners.

## **Events Organized**

Veterans India Patriotic Run (26th January, 2022)



To harbor the spirit of nationalism on Republic Day, we aimed to set ablaze the enthusiasm of the students and channelize it through "Veterans India Patriotic Run". The run was a huge success with hundreds

of students participating and showing sportsman spirit.



And a lively cricket match was also conducted between the respected faculty members and our Cricket Team.

## ARENA 2022 (25th to 27th February, 2022)

Arena the interdepartmental sports tournament of DTU was organized during 25<sup>th</sup> - 27<sup>th</sup> February, 2022. It was organized for students of all the departments including M.Tech., MBA and DTU East Campus. Hon'ble Vice Chancellor; Prof. J. P. Saini was the Chief Guest of this event.



"ARENA - 2022" was one of the bestexecuted events that the sports council has partaken in this year. It was an event that effectively showcased that there is immense potential and participation in sports and fitness activities that DTU organizes. It also showed how some incredible sports talent passively existing

in the college can come out and emerge victorious across the boundaries of the college.





Following sports were played in the same:

1. Cricket 6. Table Tennis 11. Kabaddi

2. Football 7. Lawn Tennis 3. Badminton 8. Athletics 4. Handball 9. Volleyball 5. Chess 10. Basketball

FIT - INDIA RUN was also organized as a part of Arena 2022 along with the sports activities: This event led everyone at the Arena to unite and come together for the cause of promoting sports and fitness. It was as if the run-for-cause was itself the embodiment of the passion that the students possessed and exhibited towards their respective disciplines in sports.





NSUT Agastya (11th - 13th March, 2022)

Agastya, the sports fest of NSUT, was conducted during 11th - 13th March, 2022. With participation of athletes from 8 Delhi Government Universities, it was certainly a great experience.



Games conducted in Agastya:

1. Basketball 5. Kabaddi 2. Cricket 6. Volleyball 3. Table Tennis 7. Football 4. Chess 8. Badminton

And with a participation of 270, DTU outplayed its competitors in various sports. DTU Basketball boys and girls secured silver and gold respectively, DTU Cricket boys secured silver, DTU kabaddi boys secured both bronze and silver and girls secured silver, DTU Football team secured both gold and bronze, DTU badminton team got gold, TT team got silver and the DTU volleyball team secured gold.

Based on these stats DTU did outshine its competitors in Agastya'22.

#### IIT Kanpur Udghosh (1st-3rd April, 2022)

Udghosh is the annual inter-college sports meet hosted by IIT Kanpur, it comprised of inter-college sporting events which were full of zest, there were also interactive and fun events like comedy night, band night and many more proper refreshments for all the players were also arranged, every college team displayed its enthusiasm and sportsmanship.



Games conducted in Udghosh:

Cricket
 Football
 Chess
 Basketball
 Badminton
 Lawn Tennis
 Kabaddi
 Chess
 Volleyball
 Athletics (long jump, shot put, etc.)

#### **DTU Shines:**

DTU had the biggest contingent of 236 participants in Udghosh'22. Team DTU outplayed many competitors. To begin with, DTU won 34 Medals in athletics, DTU Badminton boys and girls secured gold and silver respectively, in addition DTU's Weightlifting and Powerlifting team secured 6 medals in a team of 8 members and also the lawn tennis team secured a bronze, Silver in chess, DTU Kabaddi boys and girls secured bronze and silver respectively, DTU Volleyball boys and girls secured silver and bronze, respectively.

## 11.3 Entrepreneurship Cell

The Entrepreneurship Cell of Delhi Technological University, also known as E-Cell DTU aims to bolster pre-incubation activities and expose at an early stage the student fraternity towards the need for innovation (technology/process/business). An entrepreneurial mindset is promoted by E-Cell DTU by conducting workshops, idea and innovation competitions, hackathons etc. Also, talks by industry personnel and first-generation entrepreneurs are organized by E-Cell to spread awareness and motivate the students. Students are encouraged to explore entrepreneurship for solving the problems of the society and consumers. We strive to provide a platform for those with innovative ideas and creative minds and create an entrepreneurial ecosystem.

## **Events Organized**

Startup Weekend: 8th - 10th October, 2021:

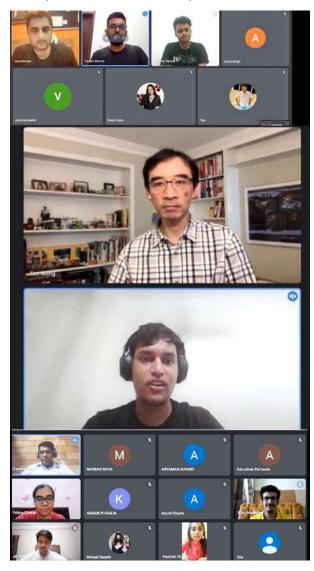


#### **DTU** organises annual Techstars Startup Weekend

Entrepreneurship Cell, Delhi Technological University is organising Techstars Startup Weekend presented by Havells & powered by Google for startups from October 8-10. Event aims at fostering spirit of entrepreneurship in young minds by providing them with right guidance & mentorship from venture capitalists, angel investors, & top notch industrialists while serving as perfect platform to lay foundation of their dream startup.

The of DTU Entrepreneurship Cell organized 'Techstars Startup Weekend' powered by Google for Startups presented by Havells during 8th - 10th October, 2021. Startup Weekend is the place where

budding entrepreneurs share their platform with like-minded people with one common goal - to launch a start-up in 54 hours. The entire event was hosted online for the participants via Zoom and Google meet. Discord was used to convey information and for the internal interaction of the teams. The participants made use of Canva, PowerPoint and Google slide to create their pitch decks for their products.



#### **ORIENTATION**

On the 15th of January, 2022, E-Cell DTU had its funny and entertaining orientation. E-Cell DTU has been promoting the spirit of becoming a 'CREATOR' by providing

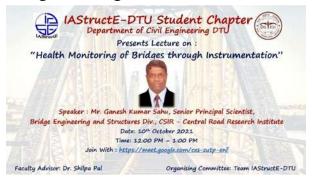
students with the necessary advice since its inception. The evening featured stand-up comedy by Comicstaan winner Nishant Suri, who elevated the event to the next level, followed by an incredible and overwhelming discussion with Mr. Subhash Choudhary, Dukaan's Co-Founder and CTO, who shared his vital life experiences. Sh. Vinod Dham, a distinguished DTU alumnus recognised as the "Father of the Pentium Chip," spoke at the event's conclusion. It was quickly followed by a flood of freshmen flocking to the E-Cell Community.



## **IAStructE DTU Student Chapter**

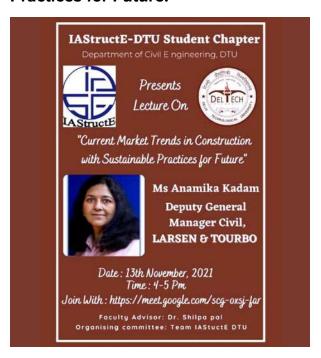
IAStructE DTU student chapter was started in January, 2020; the chapter is consistently encouraging its objective of "Promoting the Interests and Enhance the Status of the Structural Engineering Profession in India" among our fellow students. But, due to the prevalent scenario of the Covid Pandemic, a lot had suffered. But, the IAStructE DTU Student Chapter with its motto of "Learning Should Not Stop" had successfully organized many online webinars, training, etc.

## Lecture on Health Monitoring of Bridges through Instruments



The Indian Association of Structural Engineers, IAStructE-DTU Chapter, conducted a webinar on the topic Health Monitoring of Bridge through Instrumentation. The session was presided by Mr. Ganesh Kumar Sahu (Senior Principle Scientist, Bridge Engineering and Structures Div., CSIR - Central Road Research Institute). The session saw the participation of more than 70 participants includes students, faculty members of DTU, and also some people from the industry.

# Lecture on Current Market Trends in Construction with Sustainable Practices for Future.



The Indian Association of Structural Engineers, IAStructE-DTU Chapter, conducted a webinar on the topic of Current Market Trends in construction with Sustainable Practices for the Future. The session was presided over by Ms. Anamika Kadam (Deputy General Manager Civil, LARSEN & TOURBO). The session saw the participation of more than 100 participants including students, faculty members of DTU, and also some people from the industry.

## Lecture on Application of Piezo Sensors in SHM



The Indian Association of Structural Engineers, IAStructE-DTU Chapter, conducted a webinar on the topic of the Application of piezo sensors in SHM. The session was presided by Prof. Visalakshi Talakokula (Professor, department of Civil

Engineering, ECOLE Centrale School of Engineering, Mahindra University). The session saw the participation of more than 120 participants including students, faculty members of DTU, and also some people from the industry.



#### **STAAD PRO Workshop**

The basic workshop was conducted for 2<sup>nd</sup> and 3<sup>rd</sup> Year Undergraduate students to show the importance of very useful software which is also very important in our current growing industries. The workshop saw the participation of more than 20 participants students.

#### **World Earth Day**

The Tree Plantation Ceremony followed by Painting Competition went well. The organization got three Top Winners from Painting Competition. The Painting Competition was based on the theme of Sustainable Energy. After that, the team had a Photograph competition for taking the best photos of Nature. Here are the photographs of the event conducted.

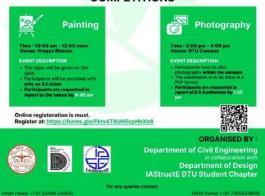


#### **ACTIVITIES**

#### TREE PLANTATION

Time : 11:00 am
Venue : Infront of Civil Engineering Department

#### COMPETITIONS









#### **11.4 NSS**

NSS DTU is the largest student-led organization in the university working in the social sector and aims to bring about a change in society by organizing diverse activities and campaigns touching all components of social service. The volunteers dedicate themselves to the greater good and strive to obtain the best versions of themselves. Awareness concerning the surroundings, figuring out social evils pertaining to a region, and formulating and imposing sensible approaches to address them constitutes the position of an NSS volunteer. Both long and short-term period applications in the field of education, healthcare, avenue safety, etc. ensure efficient functioning of NSS as a unit, encouraging teamwork and supporting its volunteers develop immensely on a personal level as well.

## **Events Organized**

#### FIT INDIA Freedom Run 2.0 2021:

NSS DTU successfully organized 'Fit India Freedom Run 2.0', an initiative led by the Ministry of Youth Affairs and Sports, as a part of its nationwide celebration of India @75: Azadi ka Amrit Mahotsav. The Guest of Honour for the event was Mrs. Anamika Chauhan, who graced the occasion with her presence and enlightened the zeal of nationhood among the participants. Despite heavy rains, the success of the event lies on the shoulders of 90 enthusiastic participants along with 20 volunteers. At first, T-shirts were distributed by the Society Council members. The run was then started, the initial and endpoint being the admin block, covering a total length of 2 km. Certificates were awarded to all the participants and volunteers.

The optimism, dedication, and wholehearted efforts of the team brought the event

towards its desired end. The event stood on the pillar of belief and trust that we can invest in the young minds of the nation. The event emerged as a great success due to undaunted and responsible management by the team. It was able to impart the message of the importance of fitness in our day-to-day lives by commemorating 75 incredible years of Indian independence. The satisfaction and joy on the face of volunteers and participants fulfilled the motive behind the event.

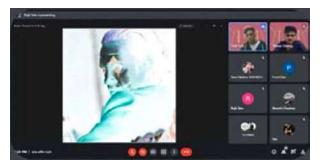


## Kalakriti - The Creative Arts Society of DTU

The Creative Arts Society of Delhi Technological University provides a platform for a wide range of artists with different perspectives on art to unite their creativity - in short, it is a place where visual art encourages imagination and creative thinking. Our society provides a very relaxed and stress-free environment by providing opportunities to keep the members engaged with their passions.

#### **Inversion Art Workshop (Nov '21)**

This workshop covered all the basics of Inversion art, Color Combinations and



11. STUDENT SOCIETIES

complementary colors. The workshop was headed by two of the Society's Art mentors, Rajit Tete and Manas Chawla.



#### Video Editing Workshop (Jan '22)

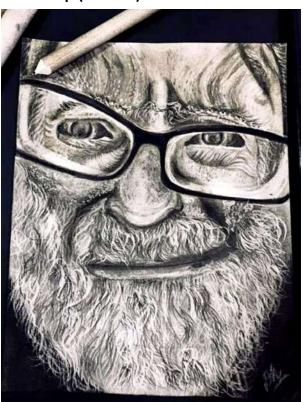
The workshop taken by Shubham Alahwat and Manas Chawla covered all the basics of Video editing, a new field recently introduced in the society. They also made the attendees familiar with the basics of Adobe Premiere Pro, a software for Video Editina.



#### Illustrator Workshop (Jan '22)

This workshop was highly anticipated among the society members and was conducted on a special demand. The workshop covered all the basics of Adobe Illustrator and helped teach art enthusiasts create digital illustrations using software. This Workshop was taken by Mehak Singhal (council member).

#### Graphite and Charcoal Sketching Workshop (Jan '22)



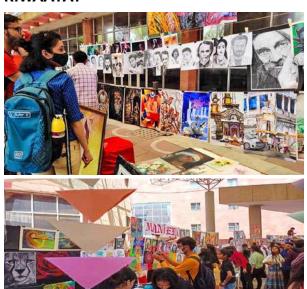
This Workshop was taken by Art Mentor of the society, Rajit Tete. His expertise in the field of sketching and pencil coloring was befitting for this workshop. The workshop was full of knowledge related to the field of Graphite and charcoal sketching.

#### **Trick O Reel Competition**



Kalakriti in collaboration with Linc pens and Color Canvas introduced a first-of-its-kind competition based on a Halloween theme. The competition was open to all, without age restriction and was a huge success as it received a tone of entries and popularity among the students of DTU as well as other reputed colleges within Delhi.

#### **RIWAAYAT**



On 6th April, 2022, the Society conducted inter-college Art Exhibition. an in association with STAEDTLER. Launcher and NAMO FIBERS, in which 20 art societies from colleges from the DU circuit and Universities across the Delhi NCR participated. The societies got the opportunity to showcase their artworks and creativity to the art enthusiasts out there. Being one of the biggest creative and fine arts societies in the north, Kalakriti has been able to successfully hold the exhibition in front of a huge audience.

The Winners of the Exhibition were:

- 1. Adwitya (Miranda House)
- 2. Team Sanjhi (DCRUST)
- 3. Cridor (College of Vocational Studies).

#### **Round Table**

A Skill Development Society of DTU organized a number of events during the period. Some of the representative events are given below:

#### **Pathway to Consulting:**

This event was open to all and held on 14<sup>th</sup> August, 2021 with a footfall of more than 100 students. This was to help students with Consulting Placement Preparation, brought in Mr. Priyank Ahuja, an ISB NUS grad working at Accenture as a guest speaker.

#### How to get tech internships in 3<sup>rd</sup> year:

This event was open to all and held on 28<sup>th</sup> August, 2021 with a footfall of more than 170 students. How to get tech internships in 3<sup>rd</sup> year was the motive. Mr. Shubhankar Gaikwad, who is working at Microsoft as an SDE and interned at Goldman Sachs during his time at IIT Jodhpur, was involved with the program.

#### **Chamber of Code:**

This event was open to all and held on 24<sup>th</sup> September, 2021 with a footfall of more than 1300 students. This was to develop coding culture amongst student fraternity, organized a competitive coding competition themed on Harry Potter Movies. It was sponsored by Coding Ninjas with courses for top 3 winners and discount coupons for participants. Also, we collaborated with Code-Chef NSUT to increase participation.



#### 11.5 Yuvaan

#### Introduction:

The Literature and Film Council (LFC) of DTU was established in 2017. The Council emphasizes the literary aspects including, but not limited to, reading, writing and observing prose and poetry. LFC has proudly hosted celebrities and artists like Manisha Koirala, Mandira Bedi, Pankaj Tripathi, Avijit Dutt, Major G.D. Bakshi, Nizami Brothers, Durjoy Datta, Mithila Palkar, Prajakta Koli, and many more.

#### Events (2021-22):

## WOMEN AT WORK: CASE STUDY COMPETITION

(20th - 26th September, 2021)

In collaboration with WICCI, LFC launched it's first Case Competition-Women at Work. It was the opportunity of creating an impact by solving a live case study from a womenled NGO.

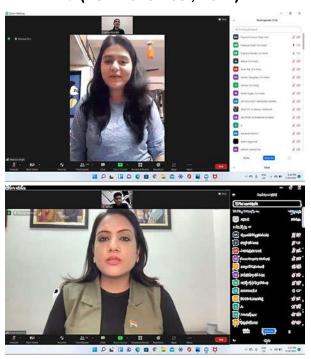
## AATMNIRBHAR BHARAT QUIZ: (31st October, 2021)



iterature and Film Council of DTU successfully organized a boisterous and one-of-a-kind Aatmanirbhar Bharat quiz on 31st October, 2021. Amidst the pandemic situation, the quiz was proficiently conducted online using the Dare2Compete

platform with the vigorous participation of 1000+ students from different colleges PAN India. The quiz consisted of 20 intriguing questions based on schemes launched by the Government of India, specifically the Aatmanirbhar Bharat scheme.

#### ATHENA: (26th November, 2021)



A women in any form shall be celebrated and honoured, be it, a sister, wife, mother, daughter or friend. Women are an embodiment of strength, commitment and will.

Literature and Film Council of DTU conducted extravaganza of ATHENA'21 to celebrate women and their lives in its event to witness QnA and live informative interview session with versatile and talented wonder women.

ATHENA'21 was celebrated in the presence of Wonder Women: Maanya Singh, IAS Sonal Goel and Meghna Pant.

Meghna Pant, the veteran author, speaker, journalist, screenwriter and the bestselling author of The Terrible, Horrible, and Very

Bad Good News (soon to be made a movie Badnam Ladoo) on 26<sup>th</sup> November, 2021. She is a multiple award-winning author, feminist, speaker and journalist. Ms Meghna Pant discussed about her complete manuscript and on her book How to get published, explaining how to market, approach publishers. Furthermore, Miss Pant enlightened us on how can one decide the good and bad books as well as on essays from Jefferey Archer

Sonal Goyal is an IAS from 2008 batch, having degrees in CS and LLB and is amongst the top 25 women transforming India and have dedicated service towards the nation for more than 13 years. She is presently posted as Special Resident Commissioner, Tripura Bhawan in New Delhi. Ms Sonal Goel talked about her career history how she choose UPSC as her career path and how she grabbed AIR 13 in civil services. Then she enlightened her thoughts on women's role and rights in society and how they manage different things efficiently in a go while facing numerous challenges.

Maanya Singh is a very talented actor who has worked in very popular television shows such as Hitler Didi. Bade Ache Lagte Hain-2 and is the brand ambassador of Beti Bachao, Beti Padhao, Rewari, Haryana. Maanya Singh talked about her initiative Beti bachao, beti padhao and how she's inclined towards bringing positive impact in the society. She talked about her journey of being an actor, her passion that includes dancing and acting and shared her experiences and her mindset to build a better community. She also inspired all of us to stay positive and motivated no matter what the situation is. On being asked about her journey and achievements, she stated about being interviewed by Arnab Goswami and how she got her first TV

job. Concluding her words Mrs Pant talked about important of feminist in society and need for gender equality.

#### RANGMANCH: (29th Dec 21 - 1st Jan 22)





Literature and Film Council of DTU organized RANGMANCH'21 to celebrate the importance of learning and exploring diverse fields and encouraging audience to take on new challenges. Rangmanch'21 was a series of events which comprised of both- competitions as well as speaker sessions. The event began with an excitement filled workshop, conducted by Shaun Williams, a profound actor and a skilled and experienced acting coach. The actor preached our audience about Acting worship involving vocal and body language exercises. The acting workshop by Shawn Williams had many exciting physical and vocal exercises which were practised in the session by over 60+ people. The session reminded everyone about the importance of physical exercises, meditation and yoga in one's life and also guided many students who wanted to pursue acting as a career.

Following the lively workshop was "Unfiltered open mic", a joyous open mic which witnessed a wide spectrum of talented singers performing classical songs as well as mashups that made us forget that this was actually an online event. The poets from different colleges presented new and fresh perspectives of the world with their proficient writing and confident delivery.

Along with "Unfiltered mic", "Abhivyakti", a creative writing competition and "Reel It", a reel making competition, were organized. The motive of these activities was to encourage everyone to embrace their creative side and showcase their talent to the world. The curtains were closed by an enriching and interactive session with Anu Aggarwal. Anu is best known as supermodel, iconic actor of blockbuster movie Aashiqui, is a self-made young achiever. She guided us through walks of her life and how yoga and meditation transformed her. She talked about imparting optimism and selfbelief in our lives for successful ventures, and her foundation namely Anu Aggarwal Foundation. The audience appreciated and enjoyed the whole event.

#### PEHLI MULAQAT: (28th January, 2022)

Pehli Mulagat was conducted on 28th January, 2022. It was an introductory event



for freshers. Literature and Film Council of DTU starred Parvinder Singh, Shivangi Bhayana, Avanti Nagral, Aseem Sharma, Abhilash Thapliyal and Ankur Warikoo in Pehli Mulagat and about 1000 students attended this online event on Zoom, in an online mode.

### **BOOK LAUNCH EVENT:** (30th January, 2022)



Literature and Film Council of DTU. organized the book launch of "The class of 2006": India's first season styled book by Mr. Akash Kansal, a DCE and FMS alumnus. The book launch was conducted in the presence of the following panelists: Mr. Akash Kansal, author and product director at Droom, Mr. R Madhavan, actor and philanthropist, Mr. Alok Kansal, General Manager at Indian Railways, IIT Roorkee alumnus, recipient of Navbharat Governance Award, 2021, Mr Ravinder Bhakar, MD at MNIT Jaipur, Ms. Tanuja Kansal, President, Women Welfare Organization, recipient of Navrashtra Women Achievers Award and Ms. Monika Meena, recipient of Mrs. India Popular 2018, and Director at K Sera Sera productions.

## **12 Central Facilities**

## 12.1 Library

Library System of DTU consists of a Central Library and 15 departmental libraries which collectively support the teaching, research and extension programmes of the Institute. All students, faculty members and employees of the Institute are entitled to make use of the library facilities on taking library membership. The library consists of huge collection of books on engineering, science and humanities. Initially setup in 1941, the Central Library moved to its new building in May, 2004. To make the Delhi College of Engineering Library a 21st century knowledge centre and to facilitate the transition of today's engineering society to a knowledge base society of tomorrow, the knowledge generated by the faculty and students of DTU has been digitized and made accessible through Intranet or Internet. Along with the automation of library services, we have moved towards the digitization of library resources, so that the services of Virtual Library and Knowledge Centre May, be provided parallel with the Traditional Library.

## **Organisation Structure:**

Name	Designation
Dr. Rama Kant Shukla	Librarian
Dr. (Mrs.) Lalita	Assistant Librarian
Mrs. Taruna Mrs. Rampati Nain Mrs. Neeru Malik Mrs. Neeru Vig Mr. Abdul Aleem	Counter Assistant
Mr. Saudan Singh	Library Attendant
Mr. Narender Sharma	Lab Attendant
Mr. Om Veer	MTS

- Name of Integrated Library Management System (ILMS): KOHA
- 2. Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment: Yes



S. No.	YEAR	AUTHOR	TITLE	
1	1859	Zherebtson	Fundamentals of Radio	
2	1900	R. Bruce, Lindsay	Physical Acoustics	
3	1913	J. Grossmann M.A.	The Elements of Chemical Engineering	
4	1914	J.E. Myers & others	Elements of Practical Chemistry	
5	1917	Herbert F. Moore	Textbook of the Materials of Engineering	
6	1917	Moore & Moore	Textbook of the Materials of Engineering	
7	1917	Herbert F., Moore	Textbook of the Materials of Engineering	
8	1920	North	Chemistry for Textile Students	
9	1920	J. Duncan	Applied Mechanics for Engineers	
10	1920	Hanry Jackson Burt	Steel Construction	
11	1920	Ewats Andrews	An Introduction Applied Mechanics	
12	1920	Ewarts. Andrews	An Introduction to Applied Mechanics	

S. No.	YEAR	AUTHOR	TITLE	
13	1920	J. Duncan	Applied Mechanics for Engineers	
14	1920	Hanry Jackson Burt	Steel Construction	
15	1920	Ewats Andrews	An Int Examples in Applied Mechanics	
16	1920	W. E. Dur	Worked Examples in Applied Mechanics	
17	1920	Ewarts. Andrews	An Introduction to Applied Mechanics	
18	1920	North	Chemistry for Textile Students	
19	1922	Fredric W. Keator	Mechanical Laboratory Methods	
20	1922	Fredric W. Keator	Mechanical Laboratory Methods	
21	1923	A. F. Clayton	Alternating Currents	
22	1923	A. F. Clayton	Alternating Currents	
23	1924	Bailey	Course of Experimental Mechanics	
24	1924	Bailey	Course of Experimental Mechanics	
25	1925	L. F. Woodroff	Principles of Electronic Power Transmission	
26	1925	Sir H. Frank	Industrial Research & Development	
27	1926	C.G. Vermon	An Introduction to Chemistry	
28	1926	C.G. Vermon	An Introduction to Chemistry	
29	1928	Rca Victor	RCA Victor Service Notes	
30	1928	H. L. Childe	Concrete Products & Cast Stone	
31	1928	S. Timoshenko	Vibrations Problems in Engineering	
32	1928	H. L. Childe	Concrete Products & Cast Stone	
33	1928	Baueree	Plain Concrete	
34	1928	E. E. Bauer	Plain Concrete	
35	1928	J. Newton Friend	Inorganic Chemistry (Vol.11)	
36	1928	J.N. Friend	Inorganic Chemistry Vol.3	
37	1928	J.N. Friend	Textbook of Inorganic Chemistry (Vol.11)	
38	1928	J.N. Friend	A Textbook of (Vol.9) Inorganic Chemistry	
39	1929	Gibson C.R.	About Coal and Oil	
40	1929	P.J. Lancelot Smith	Science Today	
41	1929	P.J. Lancelot Smith	Science Today	
42	1929	Rimbaoh R.	Beryllium and its Alloys	
43	1930	W. Abbott	Machine Drawing and Design	
44	1930	W. Abbott	Machine Drawing and Design	
45	1931	R.H. Vallence & others	T B of Inorganic Chemistry (Vol.07) Part 2	
46	1933	Kempster B, Miller	Telephone Theory and Practice	
47	1933	Reigeluth	Safety & Economy in Heavy Construction	
48	1933	Reigeluth	Safety & Economy in Heavy Construction	
49	1934	Eliot F. Tozer	Machine Drawing	

S. No.	YEAR	AUTHOR	TITLE	
50	1934	Eliot F. Tozer	Machine Drawing	
51	1934	J.L. Gregg & others	Arsenical and Argentiferous Copper	
52	1935	L. V. Gurjar	Elementary Mechanics	
53	1935	F. M. Lea	Chemistry of Cement & Concrete	
54	1935	P. Timoshenko	Elements of Strength of Materials	
55	1935	T Dyson	Principles of Mechanics	
56	1935	L. V. Gurjar	Elementary Mechanics	
57	1935	F. M. Lea	Chemistry of Cement & Concrete	
58	1936	C. F. Caunter	Small Four- Stroke Aero Engines	
59	1936	A. C. Parkinson	Intermediate Engineering Drawing	
60	1936	A. C. Parkinson	Intermediate Engineering Drawing	
61	1936	Marston	Engineering Valuation & Depreciation	
62	1936	C. F. Caunter	Small Four- Stroke Aero Engines	
63	1936	A King	Inorganic Chemistry Preparations	
64	1937	Rider J. E	Automatic Frequency Control Systems	
65	1937	Alfred T. Witts. A.M.I.E.E	Superheterodyne Receiver	
66	1937	Brown & Bryart	Engineering Science	
67	1937	Bryant & Bown	Engineering Science	
68	1928	S. Timoshenko	Vibrations Problems in Engineering	
69	1928	H. L. Childe	Concrete Products & Cast Stone	
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78	1929	P.J. Lancelot Smith	Science Today	
79	1929	Rimbaoh R.	Beryllium and its Alloys	
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90	1935	F. M. Lea	Chemistry of Cement & Concrete	
91	1935	P. Timoshenko	Elements of Strength of Materials	
92	1935	T Dyson	Principles of Mechanics	
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95	1936	C. F. Caunter	Small Four- Stroke Aero Engines	
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97	1936	A. C. Parkinson	Intermediate Engineering Drawing	
98	1936	Marston	Engineering Valuation & Depreciation	
99	1936	C. F. Caunter	Small Four- Stroke Aero Engines	
100	1936	A King	Inorganic Chemistry Preparations	
101	1937	Rider J. E	Automatic Frequency Control Systems	
102	1937	Alfred T. Witts. A.M.I.E.E	Superheterodyne Receiver	
103	1937	Brown & Bryart	Engineering Science	
104	1937	Bryant & Bown	Engineering Science	
105	1937	Brown & Bryart	Engineering Science	
106	1937	A.E. Goddard	Textbook of Inorganic Chemistry Vol.XI Part IV	
107	1937	J. Newton Friend	Textbook of Inorganic Chemistry Vol.VI Part 2	
108	1938	Groggins,P.H.	Unit Processes in Organic Synthesis	
109	1938	R.E Blakey D,Sc.	The Radio and Telecommunication Engineers Design Manual	
110	1938	Philip Gustave Laurson	Mechanics of Material	
111	1938	F. E. Wentworth	Reinforced Concrete Piling	
112	1938	Philip Gustave Laurson	Mechanics of Material	
113	1938	C. Truesdell	The Elements of Materials	
114	1938	F. E. Wentworth	Reinforced Concrete Piling	
115	1939	Hempel (E.H.)	Economics of Chemical Industries	
116	1939	Paul Arthur	Lecture Demonstrations in General Chemistry	
117	1939	Harolod Simmons Booth	Inorganic Synthesis Vol-I	
118	1939	A.M. Low	Science in Industry	
119	1939	Schnfeld H.	Chemic Und Technology Der Fette Und Fett Productive	
120	1939	Boltz C.L.	Wireless	
121	1939	J.E. Taylor	Engineering Design	
122	1939	D. Laugharne	Mechanics Applied to Vibrations & Balancing	

S. No.	YEAR	AUTHOR	TITLE	
123	1939	Clarence W. Dunham	The Theory & Practice of Reinforced Concrete	
124	1939	J.E. Taylor	Engineering Design	
125	1939	D. Laugharne	Mechanics Applied to Vibrations & Balancing	
126	1939	Clarence W. Dunham	The Theory & Practice of Reinforced Concrete	
127	1939	Paul Arthur	Lecture Demonstrations in General Chemistry	
128	1939	A. Spencer Whhite	Chemistry Gate	
129	1940	Watson H.M	Understanding Radio	
130	1940	R.V. Soutgwell	Relaxation Methods in Engineering Science	
131	1940	Tuflin	Vibration in Machinery	
132	1940	Thomas E. French	Mechanical Drawing	
133	1940	Pul	Popular Mechanics What-to-Make	
134	1940	Henry C. Sharman	Essential of Nutrition	
135	1940	R.V. Soutgwell	Relaxation Methods in Engineering Science	
136	1940	Tuflin	Vibration in Machinery	
137	1940	Thomas E. French	Mechanical Drawing	
138	1940		Popular Mechanics What-to-Make	
139	1941	Rhodes (R.T.F.)	Forensic Chemistry	
140	1941	Ward C.A.	Those Raw Material	
141	1941	Badger & Baker	Inorganic Chemical Technology	
142	1941	Fckersley P.P	Power Behind the Microphone	
143	1941	Russell & Beach	Textbook of Salesman Ship	
144	1941	Proton	Cables and Wires	
145	1941	Goodman	Mechanics Applied to Engineering	
146	1941	Low & Bavis	Manual of Machine Drawing & Design	
147	1941	H. H. Winstnly	Junior Technical Drawings	
148	1941	Goodman	Mechanics Applied to Engineering	
149	1941	Low & Bavis	Manual of Machine Drawing & Design	
150	1941	Rhodes (R.T.F.)	Forensic Chemistry	
151	1941	Jack De Ment & others	Uranium and Atomic Power	
152	1941	Farrington Daniels & others	Experimental Physical Chemistry	
153	1941	Wachtel	Chemical Warfare	
154	1942	Vierte Auflage	Brilsteins Handbuch Der Organichen Chemie	
155	1942	Ladner (AW)	Short Wave Wireless Communication	
156	1942	Fierce, (D.E)	Chemical Eng. for Production Supervision	
157	1942	Robinson,(C.S)	Recovery of Vapors	
158	1942	Roger	Industrial Chemistry	

S. No.	YEAR	AUTHOR	TITLE	
159	1942	Bevis Brunel Low	Theory of Machines	
160	1942	Clarence E. Bullinger	Engineering Economic Analysis	
161	1942	C. W. Bank	Applied Science	
162	1942	Bevis Brunel Low	Theory of Machines	
163	1942	Vierte Auflage	Brilsteins Handbuch Der Organichen Chemie	
164	1942	Lowry, C.B.E & others	Intermediate Chemistry	
165	1942	R.M. Caven	Systematic Inorganic Chemistry	
166	1943	Howard W. Post	The Chemistry of the Aliphatic Orthoesters	
167	1943	L. Gattermann	Laboratory Methods of Organic Chemistry	
168	1943	Olaf A. Hougen	Chemical Process Principle	
169	1943	Joseph Reilly	Physico-Chemical Methods	
170	1943	Turney	Intro to Electricity and Radio	
171	1943	Nelson M.Cooke	Mathematics Essential to Electricity and Radio	
172	1943	Biswas,N.N	Principles of Telephony	
173	1943	Zimmerman, (O.T.)	Chemical Eng. Laboratory Equipment	
174	1943	O.T. Zimmerman	Chemical Engineering Laboratory Equipment	
175	1943	C. R. Freberg	Elements of Mechanical Vibration	
176	1943	Morley	Applied Mechanics	
177	1943	Luzadder	Fundamentals of Engineering Drawing	
178	1943	H. K. Sen	Class Note on Surveying	
179	1943	James F. Young	Materials and Processes	
180	1943	C. R. Freberg	Elements of Mechanical Vibration	
181	1943	Morley	Applied Mechanics	
182	1943	Luzadder	Fundamentals of Engineering Drawing	
183	1943	H. K. Sen	Class Note on Surveying	
184	1943	James F. Young	Materials and Processes	
185	1943	Howard W. Post	The Chemistry of the Aliphatic Orthoesters	
186	1943	L. Gattermann	Laboratory Methods of Organic Chemistry	

Does the Institute have the following:-

E - Journals : Yes E - Books : Yes E - Shodh Sindhu : Yes Databases : Yes

Shodhganga Membership: Yes

Details of Membership / Subscription	No. of Resources with Full Text Access	Validity Period	Usages Report from the Service provider, (if applicable)	Web Link of Remote Access
DELNET	39006	31 <sup>st</sup> December, 2022	Below mentioned under electronic database	https://dtulibrary. remotexs.in/user/login

## **E** - Journals / Databases:

S. No.	E - Journals Databases	No. of Journals	Usages (Full text downloads)
1	ACM	13	3,111
2	American Institute of Physics	19	2,727
3	American Physical Society	15	922
4	ASCE	36	3,970
5	ASME	33	1,018
6	ASTM	9	392
7	EBSCO Ultimate	3,973	3,232
8	Emerald	371	14,795
9	ICE	40	560
10	IEEE/IEL	375	77,550
11	IndianJrs.com	135	2,118
12	Institute of Physics	86	4,857
13	IWA Publishing Journals	12	2,008
14	J-Gate	29,642	3,426
15	Nature	1	2,122
16	Oxford University Press	262	925
17	Sage	123	1,236
18	Science Direct	1,059	1,25,844
19	Springer Link	1,724	44,796
20	Taylor & Francis Journal	1,078	6,137

#### **Electronic Databases:**

S. No.	E - Databases	Usages
1	DELNET	7
2	Economic & Political Weekly	-
3	Engineering Village	22732

S. No.	E - Databases	Usages
4	EPWRF	1405
5	Grammarly	1000
6	HBR	11313
7	ISID	-
8	JCR (Journal Citation Report)	2729
9	Prowess	2336
10	RemoteXs	15986
11	SciFinder	-
12	SCOPUS	193221
13	SDC Thomson Reuters EIKON	
14	Turnitin	31893
15	Web of Science 415879	

### E - Books:

S. No.	Publisher	Numbers
1	Elgar (Management)	21
2	CBS (Environmental-20, Bio— Tech-5, Civil-24, Electrical - 9, ECE-10)	68
3	Elsevier (Bio-Tech-20, Chemistry-40, Civil-17, C.S.E26, Electrical-37, ECE-26, I.T22, Environmental-36, Mechanical-71 & Physics-35) 10 Departments	330
4	Pearson (Mechanical-363 & Management-27)	390
5	T & F (Electronics-38, Environmental-25 & I.T-26)	89
6	Videeya (General)	338
7	KopyKitab (General)	20
8	Wiley (Mix)	71
9	University Press/ Orient Black Swan (Civil-3, ECE-10, Envt-6	19
	Total =	1346

## **Details of Annual Expenditure for Purchase of Books and Journals During the Last Five Years:**

Year of Expenditure	Expenditure on the Purchase of Journals in (₹)	Expenditure on the Purchase of Books in (₹)	Expenditure on Subscription to E-Journals and other E-Resources in (₹)
2021-2022	₹ 1,58,827/-	₹ 4,17,264/-	₹ 3,49,40,913/- for E-Journal + 1,36,080/-for E-Books
2020-2021	₹ 1,05,058/-	₹ 39,90,632/-	₹ 6,00,84,836/- for E-Journals + ₹ 44,06,910/- for E-Books
2019-2020	₹ 2,18,597/-	₹ 57,61,881/-	₹ 1,19,25,144/-
2018-2019	₹ 2,22,143/-	₹ 58,16,766/-	₹ 2,48,24,843/-
2017-2018	₹ 2,50,916/-	₹ 16,37,587/-	₹ 2,18,25,951/-

12. CENTRAL FACILITIES

## **Central Library**

- Library Magazines and Newspaper Section
- Library Book Bank

- · Library Reading Room
- Library Text Book Section
- Library Text Book Section
- Library Entrance



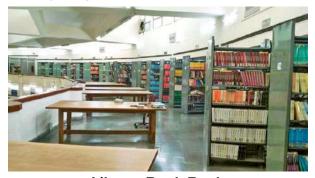
**Central Library** 



**Library Magazines and Newspaper Section** 



**Library Text Book section** 



**Library Book Bank** 



**Library Text Book section** 



**Library Reading Room** 



Library entrance

# **12.2 University Computer Centre**

DTU has a well-equipped centralized computer centre 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 having specialized laboratories to provide a variety of platforms and computing environments for UG, PG, and Research students. The centre possesses standalone Dell R630 & R720 rack servers, Dell blade servers (power edge 1000e), and about 255 desktop computers of the latest configuration (Intel Core i5 processor). These are working on Windows 10 professional edition, server 2012, 2016, and Linux platforms. Additionally, it provides Microsoft product licenses for registered Windows and MS Office to DTU faculty.

# **Organisation Structure:**

Name	Designation
Smt. Divya Narayan	Head and Chief Operating Officer
Sh. Piyush Vaish	Knowledge Network Manager
Sh. Manish Kumar	Assistant Programmer
Sh. Mukesh Kumar	Assistant Programmer
Sh. Sudhir Kumar	Network Assistant
Sh. Vinod Saini	Network Assistant
Sh. Vikas Sinha	Junior Technical Assistant

# **DTU Campus-wide Network**

The centre is networked through highend intelligent Dax/Avaya/Aruba/D-Link/ Brocade/Juniper manageable switch, and possesses round-the-clock two leased lines of 10Gbps link of NKN (primary line) and 1Gbps link of Reliance Jio (secondary line) in different pipes for the Wi-Fi connectivity in the Library, Academic, departments, Administrative, Faculty residence 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 a full version of Palo-Alto5220 (Firewall & UTM). Presently all the 255 computers are connected through LAN on two floors of the computer centre providing internet access. It is providing programming facilities to all the departments university. of the 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. To put DTU on par with IITs and reputed NITs, it is necessary to use Information Technology as the backbone for its academic, research, consultancy, and administrative ventures.

#### **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. The DTU website is updated by this centre on daily basis. 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 the university ERP system (https://cumdtu.in/ lsa\_dtu, https://cumdtu.in/staff\_dtu, https:// cumdtu.in/student\_dtu) which is developed by a third-party vendor.



# 12.3 Department of Training and Placement

The department of Training and Placement is the nodal department for coordinating the training and placement efforts of the university. It is responsible to hone the skills of talented DTU students and train 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.

# Organisation Structure:

Name	Designation
Prof. Rajesh Rohilla (Electronics & Comm. Engg.)	Head
Prof. Anil Singh Parihar (Computer Sci & Engg.)	Associate Head
Mr. Anjany Kumar	S.O.A

#### **Placements Overview:**

Organizations from diverse background participate in the recruitment session every year, offering a wide variety of profiles which can be broadly classified into:

#### 1. 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 338 job offers from 67 organizations in the Core Engineering domain.

#### 2. Software & IT Enabled services

166 leading IT firms, including several global leaders, visited DTU for campus placements during 2021-22. These organizations work with large corporations across the world and help them resolve complex business problems. Management 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. 1177 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.

#### 3. 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 881 job offers from 152 organizations in 2021-22, 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.

#### 4. Teaching

DTU has continued to provide faculty to several educational institutions and universities through campus recruitments over the past several years. Many postgraduate 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, Metis Eduventures, AdmitKard etc.

#### 5. PSU/ Government

Various PSUs and Government or ganisations 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.

#### Placement Highlights 2021-22

Name of Course	Name Of Department	No. of Offers Made	No. of Student Placed	No. of Internships and Field Training Offers	Highest Package Offered (in LPA)
B.Tech.	Automotive Engineering	45	37	6	25
	Bio Technology	32	28	9	27.55
	Civil Engineering	73	62	16	17
	Computer Engineering	438	342	221	115
	Electrical Engineering	225	177	49	112
	Electronics and Communication Engineering	179	148	39	64.23
	Engineering Physics	71	56	6	19
	Environment Engineering	34	27	9	17.36
	Information Technology	128	101	68	90.97
	Mathematics and Computing	138	103	40	64.23
	Mechanical Engineering	224	181	29	109
	Polymer Science and Chemical Technology	53	39	8	22
	Production and Industrial Engineering	43	33	7	22
	Software Engineering	155	117	53	109
	Total	1838	1451	560	***
M.Tech.	Civil Engineering	29	27	***	6.3
	Geoinformatics	5	3	***	14
	Electrical Engineering	54	41	3	19.15
	Mechanical Engineering	24	18	***	8
	Computer Science Engineering	28	19	2	40
	Software Engineering	26	20	***	19.15
	Electronics And Communication Engineering	36	29	2	35.9
	Applied Physics	***	***	***	***
	Environment Engineering	6	6	***	7.3
	Applied Chemistry	***	***	***	***
	Bio Technology	5	5	***	8.3
	Information Technology	25	21	***	19.15
	Total	238	189	7	***

Name of Course	Name Of Department	No. of Offers Made	No. of Student Placed	No. of Internships and Field Training Offers	Highest Package Offered (in LPA)
MBA	MBA (All Specializations)	186	166	142	62.51
B.Tech.(CE)	B.Tech. (Continuing Education)	92	67	***	17.36
BBA/BAE		62	56	***	15
M.Sc.	M.Sc. (Phy, Math, Bio)	10	10	1	15
B.Des		19	19	2	116.38
Ph.D.		1	1	***	10
	Total	2446	1959	712	***

**395**+ Recruiters

1.84 CR Highest CTC

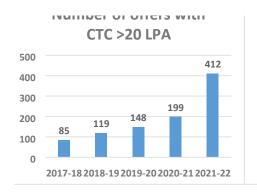
2445 Total Offers\*

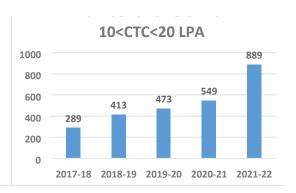
**15.24 LPA** Average CTC

# **Our Top Recruiters**

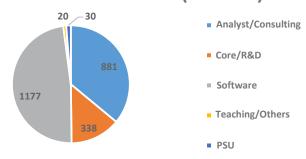
The CTC offered by companies to DTU students has also seen a steady increase in the past 5 years. In the year 2021-22, the number of offers above 20 LPA rose to 412 and those between 10 LPA and 20 LPA rose to 889. The average CTC offered is also 15.24 LPA. This is a proof of the rising demand for talented graduates of DTU. The demand for DTU students is evident from the fact that companies are not only offering high packages but are hiring in big numbers.





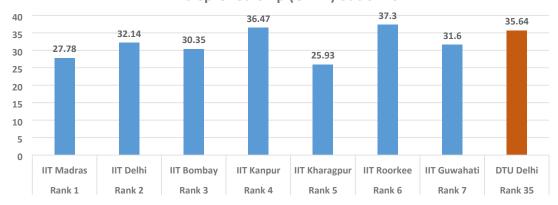


# Sector-Wise Distribution of offers (2021-22)



## NIRF Ranking 2021-22

Combined % for Placements, Higher Studies and Entrepreneurship (GPHE) out of 40



#### **International Offers**

15+ DTU students are also selected this year for international jobs, in countries like Japan, USA, Ireland, United Kingdom, Dubai, France and Germany to name a few. These students have time and again made DTU proud by their global achievements.

**710+** Offers

₹ 2 Lacs Highest Stipend

**47 Offers** Above ₹1 Lacs

203 Offers: ₹1 Lakh<50 Thousand

#### Internship

Apart from the stellar placement record, DTU also had a record-breaking internship season 2021-22. 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 Lacs.

#### **Top Internship Recruiters**

Company	Stipend	Company	Stipend
Sprinklr	₹ 2,00,000/-	Flipkart	₹ 1,00,000/-
Uber	₹ 1,60,000/-	Diseny Hotstar	₹ 1,00,000/-
Tower Research	₹ 1,50,000/-	Media.net	₹ 1,00,000/-
JPMC	₹ 1,00,000/-	Adobe	₹ 1,00,000/-
De Shaw	₹ 1,00,000/-	Google PPI	₹ 98,000/-
ARCESIUM	₹ 1,00,000/-	Salesforce	₹ 90,000 /-
Devrev	₹ 1,00,000/-	Wells Fargo	₹ 90,000 /-

# **Training Programs**

Department of Training and Placement provide industry-relevant and skill-enhancing training 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. No.	Category	Programs
1	Career Counselling	Mentorship session which enables students to gain knowledge about the various career and higher study options after graduation.
2	Skill Enhancement 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 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 Service & Higher studies	Sessions focused majorly on higher education are conducted involving experts/Alumnus from different universities in and outside India to guide the DTU students about the application process and common doubts. The sessions have been effective in augmenting the career related knowledge of students.

#### 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 (G&D) Rooms	Online Test Facility (No. of Computers in CC)	Presentation Hall
27	5	280	02

# 12.4 Sports and Gymnasium

Director Physical Education: Dr. A. K. Srivastava & Prof. R. C. Singh

#### **Facilities**

The students of Delhi Technological University are provided with excellent facilities and encouraged to take part in the tournaments held in and around NCR Delhi, particularly, engineering institutions. Delhi Technological University is having 400m running track, ground for Football, Hockey, Cricket, two courts for Volley Ball, two courts for Basketball, three courts for Tennis and five courts for Badminton, Three Kabaddi courts. Indoor Games facilities are also provided i.e. Table Tennis rooms, Chess rooms, Carom rooms and Gyms are also available in each hostel of the DTU campus. The university has well equipped aymnasium with the modern equipment's. The university students, faculty and staffs utilize this facility. There are two full gymnasiums in the university, one is situated in the sports ground and yet another is situated in the faculty residential area which is generally used by girl students also.



The main cricket field and Athletics track in the Sports Complex



Main Football Ground



Indoor Hall



The DTU Gymnasium



**Sports Complex** 

# 12.5 University Health Centre (UHC)

#### Officer-In charge; Dr. Rajesh Birok (Electronics & Comm. Engg.)

The DTU is having a modest Health Centre managed by well-experienced 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 university Health Centre is also visited by specialized medical practitioners for Eye, Dental care, Orthopedic, Gynecology, Psychiatry, Physiotherapy etc. for expert advice and treatment.

University is also having tie up with nearby leading hospitals. A large number of hospitals in the vicinity of the university are also on panel such as Saroj Hospital, Mahavir Hospital, Jaipur Golden Hospital and Max Hospital etc. Moreover, a state of art sports medicine-cum-physiotherapy center has been providing the necessary expert advice. The following doctors are engaged in the university Health Center.

S. No.	Name	Expertise	Days	Timing
1	Dr. Ravi Bansal	General Physician	Mon to Sat (six days a week)	1 PM to 5 PM
2	Dr. Rajesh Singhai	General Physician	Mon to Sat (six days a week)	9 AM to 12 NOON
3	Dr. Arpana Bansal	Eye Specialist	Mon, Wed and Fri (three days a week)	1 PM to 3 PM
4	Dr. Bharat B. Sethi	Dentist	Mon, Wed and Fri (three days a week)	1 PM to 3 PM
5	Dr. Subodh Mor	Sports Medicine- cum- Physiotherapist (MPT)	Mon to Sat (six days a week)	1 PM to 4 PM
6	Dr. Dinesh Bansal	Orthopedician	Mon, Wed and Fri (six days a week)	1 PM to 3 PM
7	Dr. Gaurav Gupta	Psychiatrist	Tue and Thu (two days a week)	1 PM to 4 PM
8	Dr. Nishi Jha	Gynecologist	Tue and Thu (two days a week)	1 PM to 4 PM

#### **Paramedical Staff**

#### Sh. Ashok Rohilla - Physiotherapy Assistant

S. No.	Nursing Staff	Attendants
1	Ms. Milan Gupta	Sh. Govind Singh
2	Ms. Anmol Jain	Sh. Govind Choudhary
3	Ms. Priya Sharma	Ms. Rekha Devi
4	Ms. Antima	Ms. Savita
5	Sh. Ashish Rana	

#### Facilities at Health Centre/Key Features

- New medical diagnostic and procedural equipment have been added such as:
  - Auto-refractometer.
  - New dental set up with latest accessories.
  - · Physiotherapy equipment like tread mill machine.
  - Oxygen concentrators.
  - Dental X-ray machine.
- · Renovation of five additional rooms is under process.
- Sign/flex boards have been put at all the prominent places display vital information related to emergency services details, depression, stress symptoms and management.
- First aid boxes procured through stores were purchased for the distribution departments in the and central utilities of the university.
- Generic medicines inventory improved and expanded with the intake of new medicines.
- Under the university Student Internship Program (USIP), such student, engaged to carry on routine assignments related to university Health Centre.
- · Started the concepts of:
  - Online consultancy the UHC doctors for all the stake holders during covid-19 pandemic.

- Feedback of the patients.
- Monthly performance reports doctors.
- Biometric attendance of the doctors and paramedical staff.
- Appointment of new clinical psychologist is under process.
- Sanction of 21 posts of doctors and paramedical staff is at final stage of approval.



# **12.6 Transport Office**

The University has established a Transport Office with the following vehicles which are available in the university for official duties time to time.

S. No.	Type of Vehicle	Registration No.	Attached With	Name of Drivers
1.	Maruti Ciaz	DL-11CB-2685	Hon'ble VC	Sh. Amit Tiwari
2.	Honda City	DL-10CA-2100	General Pool	Sh. Updesh Saini
3.	Ambassador	DL-8C-NA-3902	General Pool	Sh. C. S. Chauhan
4.	Omni Van	DL-5CD-9975	General Pool	Sh. Rishi Pal Singh
5.	Maruti Ecco	DL-1LA-2507	Emergency and Trauma	Sh. Mukesh Kumar
6.	Lab on Wheel, Swaraj Mazda CNG	DL-1MA-6407	Dean, OEA (Outreach and Extn. Activities)	Sh. Devender Kumar

# **Organisation Structure:**

Name	Designation
Prof. Nitin Kumar Puri	Transport Officer
Sh. A. K. Chauhan	Transport Consultant

"Lab on Wheel" is a customised vehicle which is used for laboratories purposes and attached with Dean, OEA (Outreach and Extension Activities) of DTU.

The university has also maintained a 35-seater CNG Bus (Swaraj Mazda, DL-1PC-3419) alongwith Sh. Ravinder Kumar, Driver and Sh. Kishan Rana, Helper for the transportation of the university Students and Staffs from nearest metro station (Badli / Rithala) to the university Campus six times in a day and the bus is also provided for various Educational and Industrial Tours by the students in the nearby areas.



## 12.7 Dr. B. R. Ambedkar Auditorium

#### Officer-In charge; Prof. Nitin Kumar Puri (Applied Physics)

The University has equipped, fully air-conditioned, state-of-art audio-visual infrastructure for webcasting in an auditorium having a seating capacity of six hundred and fifty.



#### 12.8 Store and Purchase Department

#### Officer-In charge; Mr. Pradeep Tiotia

The Stores section has a quality system of Inventory management, which involves updating records of all stores/equipments received and issued to the user department, Annual Stock Verification and Disposal of obsolete/unserviceable stores/equipment.

# **Organisation Structure:**

Name	Designation
Dr. Pradeep Kumar Teotia	Assistant Registrar
Sh. Madhuresh Kumar Jha	Section Officer
Sh. Ashok Kumar Pandey	Chief Store Keeper
Ms. Anuradha	Assistant Store Keeper
Sh. Dheeraj	Assistant Store Keeper
Sh. Sunil	Junior Office Assistant

The Purchase section has a quality policy. procurement The important consideration in purchase of goods or services are (a) Quality (b) Reliability (c) Efficiency (d) Accountability and (e) Economy - Efforts are being made to ensure placement of contract/purchase Order within the original validity of the bids. Specified quality and reliability of the supplier has to be taken into consideration with low-cost involvement. The purchase procedure being followed in this university is based on the guidelines enumerated in the General Financial Rules 2017 and Manual of Procurement of Goods 2017.

This university has various committees of the faculties/officers for making purchases:

- 1. Central Purchase Committee (CPC): The committee has been constituted consisting of the senior faculty members for the purpose of scrutiny/ evaluation of all the purchase proposals of all the department of the university, which are having the estimated cost of the item more than ₹ 50 Lacs and submits its recommendation to the Vice Chancellor, DTU.
- 2. University Technical Evaluation Committee: The University Technical Evaluation Committee (TEC) constituted for consideration, evaluation and clearance of purchase proposals of Computers, Computer Peripherals and Softwares Various departments of the university.
- 3. Departmental Purchase Committee (DPC): This committee has been constituted at the department level under the Chairmanship of respective HoD of different departments to securitize/ evaluate technical /financial bids of all the purchase proposal pertains to their department and to submit its recommendation to the Competent Authority.

Other than the above-mentioned committees, the following committee are also constituted:

- Stationery & Printing Committee and Miscellaneous Items Committee.
- ii) Chemical & Glassware Committee.

# 12.9 Estate Office and Engineering Cell

# Review of Existing Infrastructure

# Officer-In charge; Mr. Bimal jain & Prof. A. K. Srivastava (Civil Engineering)

The Delhi Technological University Campus at Bawana Road, was raised in 1997-98. While the total campus plot area is 163.87 acres (663154.03 Sqm.), only a part of it was constructed in the first phase of construction keeping in mind a target student population of 3,000 at that time. The approved area utilization norms followed areas under:

Academic: 45% (73.23 Acres)
Residential: 25% (40.68 Acres)
Green/Open: 15% (24.41 Acres)
Sports/Cultural: 15% (24.41 Acres)

# Administrative and Academic Blocks

Accordingly, the first phase of construction which was completed a round 1997-98 comprised of a total built up area of 1, 58,840.41 Sqm. with the break-up as follows:

- Academic Area 69,146.03 Sqm.
- Hostel Area 50,607.40 Sqm.
- Residential Area 39,086.98 Sqm.

The details of administrative and academic blocks of Delhi Technological University along with its corresponding approximate ground coverage and covered area details are as given below:

S. No.	Type of Block	Total Gr. Coverage (Sqm.)	Total Covered Area on all Floors (Sqm.)
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
6.	Workshop Block	3416.20	3416.20
7.	Faculty Block (Electrical Department)		1100
8.	Faculty Block (Civil Department)		1118
9.	Science Block	2817.43	8667.78

# **Existing Administrative and Academic Blocks**

- Administrative Block
- Electrical, Electronics and Civil
- Engineering Blocks

- Mechanical Engineering Block
- Workshop Block
- Science Block

The details of various central administrative and academic facilities at Delhi Technological University along with its corresponding approximate ground coverage and covered area details areas given under: -

#### **Central Administrative and Academic Facilities**

S. No.	Description of Block	Student Capacity	Total Gr. Coverage (Sqm.)	Total Covered area on all floors (Sqm.)		
1.	Main Library	400	2000.00	5500.00		
2.	Computer Centre	300	1500.00	3000.00		
3.	Multipurpose Lecture Theatre cum Seminar Hall (Auditorium)	550	2500.00	3000.00		
4.	Senate Hall	45	72.00	72.00		
5.	Exposition Hall	45	84.00	84.00		
6.	Smart Class Room-I	90	144.00	144.00		
7.	Smart Class Room-II	90	144.00	144.00		
8.	Seminar Hall (RN307)	25	112.00	112.00		
9.	Edusat Hall	40	-	-		
10.	Record Room		650.00	650.00		
11.	Department of Design		1500.00	3000.00		
12.	Classroom Blocks	1008	900.00	1800.00		
13.	Sewage Treatment Plant	1.0 MLD Capacity				
14.	Waste to Energy Plant		1.0 TPD Capa	acity		

#### **Central Administrative and Academic Facilities**

- Main Library
- Computer Centre
- Multipurpose Lecture Theatre cum Seminar Hall (Auditorium)
- Senate Hall
- Smart Class Room
- Seminar Hall
- Pragya Bhawan Canteen

# **Existing Hostels**

- JCB Hostel
- VMH Hostel
- CVR Hostel
- BCH Hostel
- HJB Hostel

- Ramanujan Hostel
- Aryabhatt Hostel
- Type-II B-5
- KCH Hostel
- SNH Hostel

- Type-III Block 1 & 2 Girls Hostel
- Dr. APJ Abdul Kalam Hostel
- Virangana Rani laxmi bai Hostel

The details of residential accommodation for faculty and staff members including numbers of different type of houses with its corresponding approximate ground coverage and covered area details areas given below.

#### Residences

S. No.	Туре	No	Total Gr. Coverage (Sqm.)	Total Covered area on all floors (Sqm.)
1.	Type VI Residence	1	200.00	250.00
2.	Type V Residence	56	2984.68	11938.72
3.	Type IV Residence	60	15650.56	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	22,196.01	31,894.04

#### **Residential Area**

- Type-I, Residence
- Type-III, Residence
- Type-V, Residence

- Type-II, Residence
- Type-IV, Residence
- · Type-VI, VC Residence

The details of various central amenities provided in the campus for resident's boys and girl students including capacity of each hostel and corresponding approximate ground coverage and covered area details are as given below.

S. No.	Description of Blocks	Total Gr. Coverage (Sqm.)	Total Covered area on all floors (Sqm.)
1	Guest House (8 Double Bedded Rooms)	414.46	828.92
2	State Bank of India	2984.68	2984.68
3	Post Office	878.28	878.28
4	12 bedded hospital	782.40	1267.00
5	Health Centre	800.00	800.00
6	Main Canteen	700.00	1500.00

#### **Central Amenities Area**

- State Bank of India
- Post Office
- 12 Bedded Hospital

- Kidzen (Crèche facility)
- Nursery School (Currently used by PWD)
- Main Canteen

# Master Plan 2022: Delhi Technological University

The overall master plan envisaged for the Delhi Technological University to be constructed in different phases is summarized below: -

Permissible	Land	Area	<b>Ground Cov.</b>		FAR		Height
	(%)	(Sqm.)	(Sqm.)		(Sqm.)		(Mts.)
Academic	45%	296361	88908	30.00%	355634	120.00%	37
Residential	25%	164645	54876	33.33%	329291	200.00%	NR

Permissible	Land	Area	Ground Cov.		FAR		Height
Community Spaces, Sports and cultural	15%	98787	9879	10.00%	14818	15.00%	26
Parks and Landscaped Open Area	15%	98787					
Total		658581	153663		699742		
Existing	Land	Area	Ground Cov.		FAR		Height
	(%)	(Sqm.)	(Sqm.)		(Sqm.)		(Mts.)
Academic	45%	296361	30673	10.35%	69146	23.33%	16
Residential	25%	164645	25284	15.36%	89694	54.48%	14.8
Community Spaces, Sports and cultural	15%	98787	850	0.86%	850	0.86%	3.6
Parks and Landscaped							
Open Area	15%	98787					
Total		658581	56807		159689		

Proposed	Land	Area	Ground Cov.		FAR		Height
Academic	45%	296361	39425	13.30%	241069	81.34%	36.45
Residential	25%	164645	29310	17.80%	189166	114.89%	41.85
Community Spaces, Sports and cultural	15%	98787	4060	4.11%	5846	5.92%	15
Parks and Landscaped Open Area	15%	98787					
Total		658581	72795		436081		
Total	Land	Area	Ground Cov.		FAR		Height
	(%)	(Sqm.)	(Sqm.)		(Sqm.)		(Mts.)
Academic	45%	296361	70098	23.65%	310215	104.67%	36.45
Residential	25%	164645	54594	33.16%	278860	169.37%	41.85
Community Spaces	15%	98787	4910	4.97%	6696	6.78%	15
Ancillary Services	15%	98787					
Total		658581	129602		595771		

# Infrastructure Added during A.Y. 2021-2022

S. No.	Building Names	Ground Coverage (Sqm.)	Built Up Area (Sqm.)	No. of Storey
1	Boys Hostel H5	519	5895	B+G+11
2	Girls Hostel HG5	426	5937	B+G+11
3	Girls Hostel HG6	426	5937	B+G+11
4	Academic Block AB3	1809	18436	B+G+8
5	Academic Block AB4	2285	23198	B+G+8
6.	Cafeteria (Pragya Bhawan)	167	167	Single Storied
	Total	5632	59570	

The construction of 681-seater girls Hostel 321-seater Boys hostel has been completed.

# **Expansion of DTU campus Ph-II: Phase-wise Construction plan**



PHASE II

Proposed Buildings in Phase II with Existing Buildings of Phase-I

# **East Delhi Vivek Vihar Campus**

The Hon'ble Lt. Governor, Delhi has pleased to allow the use of existing Campus of Shaheed Sukhdev College of Business Studies, University of Delhi for running East Campus of Delhi Technological University (DTU) on temporary basis. Consequent upon this, new session for conducting various courses has been started at DTU

East Delhi Campus at Vivek Vihar during the year 2017-18. Hon'ble Chief Minister of Delhi inaugurated the new Campus of DTU. The existing plot area of DTU East Delhi Campus at Vivek Vihar is 8341 Sqm. (2.06acre). The built-up area comprising of the following buildings are as follows.

S. No.	Name of Building	Area (Sqm.)	Remarks
1	Main Building	4,417.00	Four Storied
2	University School of Management and Entrepreneurship	576.68	Double Storied

S. No.	Name of Building	Area (Sqm.)	Remarks
3	Class Room Block-A & Canteen	382.11	Single Storey
4	Class Room Block-B	516.16	Double Storied
	Total	5,941.65	

# East Delhi (ITI Mayur Vihar) Campus

A piece of land measuring 4852.8 Sqm. has been allotted initially in ITI Mayur Vihar Campus for Establishment of East Delhi Campus/ Constituent College of Delhi Technological University by the DTTE. For development of campus, the soil investigation work has already been carried out by PWD.





#### Virangana Laxmi Bai Hostel

- The Newly Constructed two blocks of Girls Hostels has 12 floors each 11874 Sam. Total plinth area and 229 rooms for girls' students.
- · Girls Hostels has 685 Nos. beds accommodation with facilities of Drawing/Dining Room, Guest Room, Gymnasium, Parlour, TV/ Activity Room, TT Room, Reading Room and Internet Room at ground floor.

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

- The Newly Constructed Boys Hostels also has 12 floors each 5894 Sqm. Total plinth area and 107 rooms for boys' students.
- Boys Hostels has facilities Drawing/Dining Room, Guest Room, Gymnasium, TV/Activity Room, TT Room, Reading Room and Internet Room at ground floor.



12. CENTRAL FACILITIES

# Computer Centre Lab. 3<sup>rd</sup> Floor

- Computer Center Lab has a seating capacity of 174.
- Computer Center with fully air conditioning with VRF system.



# Cafeteria (Pragya Bhavan)

- Cafeteria fully equipped with furniture and other essential items has been constructed in Pragya Bhavan in DTU Campus. The Cafeteria has total area of 166.96 Sqm.
- Seating capacity (54) inside the cafeteria and more than 100 outside the cafeteria.
- Beautiful greenery and flowers outside the cafeteria.



#### Lab on Wheels

 Lab Wheels' revolutionary is а programme launched by Delhi Technological University (DTU) to impart knowledge fields in the of Mathematics and Science to the students who belong underprivileged families. It is launched awaken the



interest of such students in these subjects while they pursue their higher education. The programme will mutually benefit both the underprivileged students as well as DTU, in cases where any of these students decide to take admission in DTU to pursue higher education.

• The bus equipped with 16 computers, 2 televisions, one 3D printer, one laptop, one printer and cameras. The 'Lab on Wheels' is fully air-conditioned and has facilities such as Wi-Fi, and 100% power backup.

# **Ongoing Construction of New Buildings in DTU Campus**

- Raj Soin Hall (M.P. Hall)
- Academic Blocks for the Newly Added UG and PG programs. (Under Construction)
- C/o Four Storied Mess Building for the Girls Hostel.
- C/o New Administrative Block of DTU campus.

- · Development of DTU Pond.
- C/o of New Academic Building for the East Delhi campus of DTU.
- C/o New Gate for the DTU campus.
- Upgradation of the DTU Parking System

# 13 Other Facilities

#### 13.1 DTU Studio

#### Officer-in-Charge; Prof. S. Indu (Electronics & Comm. Engg.)

- Television Studio Delhi The at Technological University is an example of Innovation and Industry Academia Collaboration. The spacious television studio can handle Pre-Production. Production and Post-Production activities for various activities like Interview, panel discussion, short plays, lectures, etc.
- DTU Studio comprises of a multicamera setup with lighting grids and a Teleprompter, Production control room with control panels which can handle multiple video and audio sources online and offline, Graphics and special effects generators, video edit suites with a Mac equipped with Final Cut Pro Video Editing software, Motion, Live-Type, EDIUS 9.0 video editing software and Photoshop CS6, etc.
- 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, hasslefree management, promptness and professional approach.
- The students of Delhi Technological University are engaging in a whole range of In-house and Outdoor production activities. These activities are widely admired for their timely execution, promptness and hassle-free operations. In addition to this, trouble free operation

and promptness of these activities is our strength and are rendered in the best possible way.

#### Infrastructure

- · DTU Studio is having facility of two studios at Delhi Technological University. It has the facility of Indoor production as well as Outdoor production. One of the studios has the facility of Teleprompter, Chroma keying with virtual studio sets and all necessary equipment for video production.
- DTU Studio is equipped with sophisticated high-end broadcasting equipment for production like 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, One7DellPrecisiontower7810 dualIntel Xeon Workstation, VT-5 Live switcher, Sony D-800 Live switcher, Newtek live audio and video switcher, Two YammaO1V96 digital Audio Consol. Two lite- PuterCV12.

#### **Utilization**

· DTU Studio is covering all university Events. International Conferences. Meet as well as the Global Initiative of Academic Networks (GIAN) in Higher Education Programs where renowned Experts faculty, Guest Lectures from internationally and national facility lectures are recorded.

# **Services being Offered**

· With the support of our in-house facilities, we are busy in offering Pre production, Production and Post Production Facility for recording various programs like Interview, Panel Discussion, short plays, lectures, etc.

- · in the spacious television studio of the university located at the 1st floor of Civil/ Environment Engineering department.
- To offer these services, we have hired skilled and innovative professionals that hold in-depth knowledge and immense experience in their respective domain. The offered services are committed for their flexibility, reliability and timely execution.
- Apart from this, we are engaged in offering an impeccable quality of Outdoor Photography and Video Production Service with respect to suit the exact preferences as required. These services are available in various customized solutions as per the requirement.

These services are widely admired for their timely execution, promptness and hassle-free operations.

YouTube Channel QR Code:



Videos uploaded by DTU Studio on YouTube channel of DTU Studio from 1st August, 2021 to 31st July, 2022 ( https://www.youtube.com/c/dtustudio)

Video Title	Link
Leadership Mastery Through Self-Management   Hon'ble Vice Chancellor Prof. Yogesh Singh Address in FDP	https://youtu. be/7ZxP8MHUQnM
Leadership Mastery Through Self-Management Faculty Development Programme - 2021   Day-1, Part-1	https://youtu.be/ZY-F6nZXly0
Leadership Mastery Through Self-Management Faculty Development Programme - 2021   Day-1, Part-3	https://youtu.be/3vO5Ze7D8Hc
Leadership Mastery Through Self-Management Faculty Development Programme - 2021   Day-1, Part-4	https://youtu.be/l3oFKGMGpsk
Leadership Mastery Through Self-Management Faculty Development Programme - 2021   Day-1, Part-5	https://youtu.be/vncNutasnyl
DTU Family Celebrate 75 <sup>th</sup> Independence Day-2021 Azadi Ka Amrit Mahotsav	https://youtu.be/1r33t6Xu8G8
The Secret for Converting Interviews into Job Offers Best way to convert interview into job offers	https://youtu.be/pAu1s21kQHw
Flag-off Ceremony of Lab on Wheels Lab on Wheels programme by Delhi Technology University	https://youtu.be/oAbyFOEvh2k
ROOBAROO-18   A Big Changes in DTU   Sh. Anoop Lather Interviewing Prof. Yogesh Singh Vice Chancellor DTU	https://youtu.be/MS6LLbH7otA

Video Title	Link
Inauguration of High-tech and Fireproof Digital Record Room of DTU	https://youtu.be/IMrSpOC-h8k
A journey of Success   Success Story of Prof. Yogesh Singh, Kurukshetra to Delhi	https://youtu.be/WCnLyN7rt4M
Inauguration of Center of Excellence for Electrical Vehicles & related Technologies	https://youtu.be/LJMDoqQtonw
Highlight- Farewell Function of Prof. Yogesh Singh	https://youtu.be/S8N_FZsKtFc
How to prepare and crack civil service exams - DTU Training & Placement Department	https://youtu.be/iqhjITKVJyU
Journey of DTU   80 years of progress Delhi Polytechnic to Delhi Technological University	https://youtu.be/U98HvkryfAs
The Future of Connectivity- Internet of Things (IOT) Inaugural Session of IEEE workshop	https://youtu.be/XnJj_9KH8WQ
Prof. Yogesh Singh Joining as Vice Chancellor of Delhi University	https://youtu.be/hYP2xFgKFsU
ROOBAROO-19   Anoop lather Interviewing Prof. Yogesh Singh Vice Chancellor Delhi University	https://youtu.be/PTmfsBEuaKY
Flag off "Lab on Wheels" on 8 <sup>th</sup> Nov, 2021 by Prof. J. P. Saini Vice Chancellor DTU	https://youtu.be/bZ2fRdJoVAs
Foreign National Students admitted through DASA, ICCR, DTU Portal in Academic Year 2021-22	https://youtu.be/IBNaTNpqt1A
Day-1 of Orientation Programme for B.Tech. Students Admitted -2021	https://youtu.be/KvWAycw8ikM
Day-2 of Orientation Programme for B.Tech. students Admitted 2021	https://youtu.be/6bOjObs1cQs
Day-3 of Orientation Programme for B.Tech. students Admitted 2021	https://youtu.be/RMGoWmIROXI
Day-4 of Orientation Programme for B.Tech. students Admitted 2021	https://youtu.be/MSbyz0_lhll
Golden Pride Function - DTU 8 <sup>th</sup> Convocation	https://youtu.be/liXB-Te80Pg
DTU 8 <sup>th</sup> Convocation-2021	https://youtu.be/L0g8khDCnRg
JAC-2021 SPOT ROUND Details   By Official page of Delhi Technological University	https://youtu.be/HvI9MlildQ8
Golden Pride Function   DTU 8 <sup>th</sup> Convocation-2021   Part-1	https://youtu.be/oTbk0OwIDZc
Golden Pride Function Part-2   Address by Prof. Yogesh Singh Hon'ble Vice Chancellor of DU	https://youtu.be/svzZeQgkBO0
Golden Pride Function Part-3   Address by Chief Guest Prof. Anil D Sahasrabudhe Chairman AICTE	https://youtu.be/CL2JpgMDWgU
Golden Pride Function Part-4   Award Distribution Ceremony Proud moment for DTU Gold Medalist	https://youtu.be/ FWC26wQcEWs
Golden Pride Function Part-5 DTU Gold Medalist Experiences   How to get Gold in DTU	https://youtu.be/ANmpxrkyk3k

Video Title	Link			
DTU 8 <sup>th</sup> Convocation 2021 Part-1 Address by Prof. J. P. Saini, Vice Chancellor, DTU	https://youtu.be/zlJgDaecpuU			
8 <sup>th</sup> Convocation 2021 Part-2   Presentation of Chancellor Medals by Dean Academic UG & PG	https://youtu.be/7Q5bZua6Vvc			
8 <sup>th</sup> Convocation 2021 Part-3   Address by PAYTM Founder & CEO and DTU Alumni Vijay Shekhar Sharma	https://youtu.be/HWWgEigMVyl			
DTU Family Celebrating 73 <sup>rd</sup> Republic Day -2022 Happy Republic Day-2022	https://youtu.be/lxPDjRwYh1l			
8 <sup>th</sup> Convocation 2021 Part-4   Address by Sh. Manish Sisodia, Deputy CM & Education Minister of Delhi	https://youtu.be/ds-k_m2p6Wc			
DTU 8 <sup>th</sup> Convocation Part-5   Address by Sh. G. S. Reddy Secretary, Department of Defence R&D Chairman DRDO	https://youtu.be/KX6q5UQ-F7Q			
DTU 8 <sup>th</sup> Convocation Part-6   Presentation of Mementos	https://youtu.be/RCnS3yAXJPs			
DTU Homecoming-2022   DTU Home Coming Fest First Offline Cultural Fest of DTU in 2022	https://youtu.be/zzGLyGhXgFA			
DTU 5 <sup>th</sup> Research Excellence Awards Function-2022, Part-1	https://youtu.be/QVsqE0ckwxs			
DTU 5 <sup>th</sup> Research Excellence Awards Function-2022, Part-2	https://youtu.be/-FVOSyjPNWw			
DTU 5 <sup>th</sup> Research Excellence Awards Function-2022, Part-3	https://youtu.be/mLJ1DGNkykU			
DTU 5 <sup>th</sup> Research Excellence Awards Function-2022, Part-4 Research Excellence Awards Distribution	https://youtu.be/5ZOfmf8nOT4			
International Women's Day Special Seminar Significance of mental health & psychological Part-1	https://youtu.be/wFDt98QXjwA			
International Women's Day Special Seminar Significance of mental health & psychological Part-2	https://youtu.be/5sYvwZSCebQ			
International Women's Day Special Seminar Significance of mental health & psychological Part-3	https://youtu.be/IIIQGuWfgqs			
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-1	https://youtu.be/KFCkJr7PgZ0			
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-2	https://youtu.be/CbbeyuAHk_s			
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-3	https://youtu.be/HGSWV0B8vEI			
World Water Day-2022 Special Seminar Groundwater- Invisible Resource Visual Impact   Part-4	https://youtu.be/jSqkMVfh_CY			
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-5	https://youtu.be/zsy8P6T75n0			
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-6	https://youtu.be/XSVVIeNNn6A			
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-7	https://youtu.be/noKiAzj1CYU			

Video Title	Link		
World Water Day-2022 Special Seminar Groundwater Invisible Resource Visual Impact   Part-8	https://youtu.be/8ibP4Mly3kc		
SANKALP for Your Career? Motivational Speech for Students   Welcome address Video	https://youtu.be/EFzIbWz8kHw		
SANKALP for Your Career? Motivational Speech for All Students	https://youtu.be/MYjO01e_8CY		
DTU Students Visit to Bharat Electronics Limited Industry Tour of DTU Students-2022   BEL Visit	https://youtu.be/3JaAVxZ-ihQ		
DSM Presents- HR Conclave'22 Managing Multi Generational Workforce Part-1	https://youtu.be/oFQUBXbFpZQ		
"Riwaayal" A Creative Art Show Presented By Kalakriti (The Creative Art Society of DTU)	https://youtu.be/LHTh8Us7_CU		
DSM Presents- HR Conclave'22 Managing Multi-Generational Workforce Part-2	https://youtu.be/M4JR3GC8LoM		
DSM Presents- HR Conclave'22 Managing Multi-Generational Workforce Part-3	https://youtu.be/fJni9uUV4hE		
DSM Presents- HR Conclave'22 Managing Multi-Generational Workforce Part-4	https://youtu.be/jV3dZC4l1Rw		
DSM Presents- HR Conclave'22 Managing Multi-Generational Workforce Part-5	https://youtu.be/LgQn83I0e7M		
DTU E-Summit-2022 Part-1	https://youtu.be/a_b5U75Q5fw		
DTU E-Summit-2022 Part-2	https://youtu.be/u1jcTFMkdOc		
DTU Batch-2022   DTU Batch Photography-2022 Highlight DTU Class of -2022	https://youtu.be/5ZLGNi3C2Ds		
Cadence! The Inter college Music Competition-2022 Highlight	https://youtu.be/pDmb-6AP4n0		
Meet Business Model Canvas (BMC)	https://youtu.be/qaylZvcqHEs		
साइबर क्राइम से बचाव के उपाय   साइबर सुरक्षा Cyber Awareness Day Special Video Part-1	https://youtu.be/gVZd3nS284g		
साइबर क्राइम से बचाव के उपाय   साइबर सुरक्षा Cyber Awareness Day Special Video Part-2	https://youtu.be/nXt4uPaZW3c		
Drawing Competition organized by the Dept. of Environ. Eng. DTU on World Environment Day -2022	https://youtu.be/Srtu7jaMR48		
DTU Family Celebrating International Yoga Day 2022 Yoga for Humanity   विश्व योग दिवस - 2022	https://youtu.be/toOMA6BMRXk		
YOGA ASANAS for GOOD HEALTH   DTU Celebrating International Yoga Day-2022   Yoga for All Age Groups	https://youtu.be/sW4JJDQs1vg		
Inauguration Ceremony of Newly Constructed Boys & Girls Hostel	https://youtu.be/oqjw7LYnDZo		
Inauguration Ceremony Highlight of Newly Constructed Boys & Girls Hostel DTU   New Hostel of DTU	https://youtu.be/kYB8BA3p5L4		

# **13.2 University Guest House**

# Officer In-charge; Dr. R. K. Yadav (Computer Sc. & Engineering)

The University has one guest house within the campus primarily meant for official guests of the DTU, Participants of seminars/Workshops/Conferences/Training programs organized by the University/Centers/Departments. The rooms are comfortable with all modern facilities available within. It consists of eight double-bedded rooms.







13. OTHER FACILITIES















# **14 University Accounts**

#### <u>DELHI TECHNOLOGICAL UNIVERSITY</u> <u>BALANCE SHEET AS AT 31ST MARCH, 2022</u>

SOURCES OF FUNDS	Schedule	As at 31-03-2022 (Rs)	As at 31-03-2021 (Rs)	
CAPITAL FUND				
CORPUS FUND	1	5,227,652,650.17	3,990,871,918.20	
DESIGNATED/EARMARKED/ENDOWMENT FUNDS	1A	460,195,422.00	437,375,419.00	
CURRENT LIABILITIES AND PROVISIONS	2	2,112,542,845.57	2,153,524,889.22	
CORREST EIABILITIES AND PROVISIONS	3	60,191,042.11	58,428,456.00	
TOTAL	13	7,860,581,959.85	6,640,200,682.42	
APPLICATION OF FUNDS				
FIXED ASSETS	4			
Tangible Assets	12.57	3,461,232,151.34	3,295,920,431.34	
Intangible Assets		28,095,842,89	8,760,944.85	
Capital Work In Progress		189,328,703.00	189,287,440.00	
INVESTMENTS	5			
Long Term		1,503,694,161.00	*	
INVESTMENTS - OTHERS	6	386,415,725.00		
CURRENT ASSETS	7	2,203,701,383.62	3,088,738,395.23	
LOANS, ADVANCES AND DEPOSITS	8	88,113,993.00	57,493,471.00	
TOTAL		7,860,581,959.85	6,640,200,682.42	
SIGNIFICANT ACCOUNTING POLICIES & NOTES TO ACCOUNTS	23			

For M.A.M & Associates Chartered Accountants

Ajay Kumar Gupta (Partner) M.No. 095390



UDIN: 22095390 ATXBWD7537

For Delhi Technological University

Ajay Kumar Gupti (Sr. AO-I) Jaspot Singh (SpAO/DDO)

Mahesh Kumar (DCA)

Narendra Dev (Controller of Finance)

Prof. Madhusudan Singh (Registrar)

J P Saini (Vice Chancellor)

Place: New Delhi

Dated: 16th September, 2022

#### DELHI TECHNOLOGICAL UNIVERSITY INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2022

INCOME	Schedule	2021-2022 (Rs)	2020-2021 (Rs)		
Academic Receipts		1 (25 104 144 8)	1 700 005 251 14		
Grant in Aid	9 10	1,625,494,144.86	1,309,997,351.14		
Income From Investments	11	410,000,000.00	250,000,000.00		
Interest Earned	12	12,142,401.00	12,319,335.00		
Other Incomes	13	18.785.377.55	45,599,852,37		
Prior Period Income	14	18.785.377.55	45,599,852.37		
TOTAL (A)		2,066,421,923.41	1,617,916,538.51		
EXPENDITURE					
Staff Payments & Benefits (Establishment Expenses)	15	988,579,208.00	897,084,404.00		
Academic Expenses	16	122,614,784.00	76,334,332.00		
Administrative and General Expenses	17	298,270,328.00	267,191,650.04		
Transportation Expenses	18	63,638.00	112,999.00		
Repair and Maintenance	19	132,182,216.27	107,415,063.00		
Finance Costs	20	418,413.56	480,683.40		
Depreciation	4	193,057,784.09	229,895,651.00		
Other Expenses	21	Constitution of the Consti			
Prior Period Expenses	22	3,688,790.00	-		
TOTAL (B)	-	1,738,875,161.92	1,578,514,782.44		
Balance being Excess of Income over Expenditure		327,546,761.49	39,401,756.07		
Transfer To Retirement Benefits Fund		20,000,000.00	200,000,000.00		
Building Fund		-	-		
Balance Being Surplus/(Deficit) Carried To Capital Fund	-	307,546,761,49	(160,598,243.93)		

SIGNIFICANT ACCOUNTING POLICIES & NOTES TO ACCOUNTS

23

For M.A.M & Associates **Chartered Accountants** 

Ajay Kumar Gupta (Partner)

M.No. 095390

UDIN: 77095390 ATXB WD 7537

For Delhi Technological University

NEW DELH

Ajay Kumar Gupta

(Sr. AO-1)

Jaspa Singh

(Sr.AO/DDO)

Mahesh Kumar

(DCA)

Narendra Dev

(Contoller of Finance)

Prof. Madhusudan Singh (Registrar)

(Vice Chancellor)

Place: New Delhi

Dated: 16th September, 2022

# <u>DELHI TECHNOLOGICAL UNIVERSITY</u> RECEIPTS AND PAYMENT ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2022

- a) Estab
461 469 204 06
1,789,104,205.00
144,740,408.80
30,000,000,00 250,000,000,00
1,309,997,351.14 III. Payment against Sponsored
1,041,701,455,50 IV. Expenditure Out of Corpus Fund
72,000.00 V. Investment and Deposits made a) Out of Earmarked /Endowr b) Out of own funds (Investme
77,870,714,00 11,383,030,00 30,522,469.00
5,694,630.00



	29,000.00	,	578,354,684.93 2,300,908,364.00 204,473,798,30			5,445,312,165.63
	12,200,552.00		1,060,279,622.04 950,350,1+3.00 193,071,618.58			6,753,060,952.07
IX. Refund of Grants	X. Deposits and Advances	XI. Other Payments	XII. Closing Balance a) Cash in hand a) Bank Balance In Current accounts In Deposit accounts In Saving accounts			Total
-				292,756,698.13	-	5,445,312,165.63
0			4,126,879.00	286,229,842.70		6,753,060,952.07
X, Investments encashed	N. Term Deposits with Scheduled Banks encashed	NI. Other Income (including Prior Period Income)	XII. Deposits and Advances	XIII. Miscellaneous Receipts including Statutory Receipts.	XIV. Any other Receipts	Total

For M.A.M & Associates Chartered Accountants Ajay Kumar Gupta (Partner) M.No. 095390 James H

For Delhi Technological University UDIN-39095390月TX B WD 子写3子

J P Saini (Vice Chancellor)

Narendra Dev (Contoller of Finance)

Place: New Delhi Dated: 16th September, 2022

#### **DTU RANKINGS 2022**





(IIIT Patna), Patna



















# **DIRECTOR, IQAC**



Prof. Nirendra Kumar-I Jan., 2016 to Dec. 2017



Prof. M. M. Tripathi Jan., 2018 to Dec. 2020



Prof. Nirendra Dev Jan. 2021 to July, 2022



Prof. Neeta Pandey Aug. 2022 to till Date

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