

ADMISSION BROCHURE FOR WINTER SESSION PH.D. ADMISSIONS **2021-22**



INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN

(Established by Govt. of Delhi vide Act 09 of 2012)

Kashmere Gate, Delhi – 110006

www.igdtuw.ac.in

From the Vice Chancellor's Desk.....



"YOU EDUCATE A MAN; YOU EDUCATE A MAN.

YOU EDUCATE A WOMAN; YOU EDUCATE A GENERATION." - Brigham Young

Education is fundamental to development and serves as an important driver for the growth of any country. However, for our country, it's of considerable significance if we can educate the women of our country by creating a learning platform for knowledge transfer from one generation to another generation.

The vision of the University appropriately fits and sync with these thoughts and since its inception in 2013, I can proudly say that IGDTUW ennoble oneself as one of the premier institutions for providing higher education and quality learning for the Women in India. The University located centrally in the capital city of India, is a beacon of knowledge and has pioneered numerous novel initiatives and innovations in quality teaching and enhancing student learning.

Despite its young age, IGDTUW is much admired (recognized) as an integral part of Delhi's cosmopolitan vibrant space. We possess our motto *Aapo Dipo Bhava* ("Be a light unto yourself") at the heart of everything we do and we can make this University inimitable by engendering new ideas, learning and innovations that will benefit the society and educate people. In this view, the University has introduced Choice Based Credit System (CBCS) for engaging students in dynamic learning and to explore and enlighten their knowledge beyond just getting admitted and completing conventional degree courses.

With seven departments and a pool of almost 200 dedicated and talented teachers and staff members, the University is committed to offering exceptional educational opportunities across a wide range of curricula and advanced courses, avant-garde pedagogy, excellent infrastructure, and comprehensive extracurricular activities. Here at IGDTUW, we offer a dynamic platform to our students with plethora of opportunities designed to either start their career or move their career forward while enabling them to confidently explore new industries for career potentials and dive into opportunities that they may not be aware of. Our University not only aims to deliver theoretical knowledge but also provides our students with a platform to find the entrepreneur in them with the help of our business incubator "Anveshan Foundation".

On behalf of the University Community, I invite the parents and students to explore our offerings in the pages that follow. I am assured that your being part of the student community of the University will enrich you, help you grow, empower you to make fair choices, and facilitate you to take up roles in life in a fulfilling manner not only for yourself but also for the humankind.

I look forward to your having a pleasant, healthy, and fruitful association with IGDTUW.

(Dr. (Mrs.) Amita Dev)
Vice Chancellor, IGDTUW



University at a Glance

Indira Gandhi Delhi Technical University for Women [IGDTUW], Delhi was established by Delhi Government in May 2013 vide Delhi State Legislature Act 9,2012 in order to play a major role in the capacity building and imparting high quality Technical Education to Women of our Country. The university having more than 2700 students is functional from the heritage Kashmere Gate Campus, in the heart of Delhi. As a matter of pride, in a short span, the University has achieved a number of milestones, a few of them are: Ranked 2nd under Women Colleges and Universities in ARIIA-2020, University of The Year-2021(1-10 years) by the FICCI Higher Education Excellence, Diamond Rating and E LEAD Institute by QS I-Gauge (Indian College & University Rating). The World *Times Higher Education* Impact Rankings 2021 has ranked IGDTUW globally at 101-200 rank and 1st in India for Quality Education and Gender Equality. IGDTUW has been ranked by INDIA TODAY Survey-2020, as the University/College with the best value for Money. The University offers undergraduate and post graduate programs in Engineering & Technology, Management and Architecture & Planning to the women of the country leading towards their enlightenment and empowerment



Sustainable Development Goals Breakdowns



IGDTUW World *Times Higher Education* Impact Rankings 2021

Infrastructure and Academic Programs

IGDTUW has a state-of-the-art infrastructure comprising of modern well-equipped Labs, fully Wi-Fi enabled campus, Computer Centre, fully Automated Library, Auditorium, Multi-purpose Hall, Conference Room, Seminar Room, Hostels, Sports Facilities, etc. The classrooms are equipped with complete ICT infrastructure. Faculty are encouraged to use Interactive boards, multimedia projectors, digital podium, LCD panel, LCD digital display, and professional interactive touch display.

IGDTUW has worked hard to build a strong academic curriculum with a rich diversity of courses and is working towards new academic initiatives. Academic innovations have always been topmost in the priorities of the University.

With globalization, today's graduates need to be flexible, to be able to learn quickly and to be able to innovate to produce products and services that can cater to local needs and global standards. The institute has designed the B. Tech. curriculum from the ground up to produce technology-savvy leaders and designers for future India.

The curriculum has a broad base of courses in Architecture, Engineering, Management, and Humanities. The syllabi are continuously updated and new courses are added from time to time. Academic Council and the Boards of Studies have representations from industry in addition to academicians from top academic institutions. It offers B.Tech. in Computer Science & Engineering (CSE), Electronics & Communication Engineering (ECE), Mechanical & Automation Engineering (MAE), and Information Technology (IT). It also offers M.Tech-CSE (Artificial Intelligence), M.Tech. (Robotics & Automation), M.Tech-ECE (VLSI), M.Tech (Information Security Management) and MCA. The institute also offers courses in Architecture & Planning, Management, and PhD in all the mentioned departments.

Courses Offered

Undergraduate Courses

	Name of the Course	Specialization	Duration (Year)
1	B.Tech.(CSE)	Computer Science & Engineering	4
2	B.Tech.(ECE)	Electronics & Communication Engineering	4
3	B.Tech.(MAE)	Mechanical & Automation Engineering	4
4	B.Tech.(IT)	Information Technology	4
5	B.Arch.	Architecture and Planning	5
6	BBA	Management	3

Post Graduate Courses

	Name of the Course	Specialization	Duration (Year)
1.	M.Tech.-IT(ISM)	Information Security Management	2
2.	M.Tech.-CSE (AI)	Artificial Intelligence	2
3.	M.Tech.-ECE(VLSI)	VLSI Design	2
4.	M.Tech (Robotics and Automation)	Robotics and Automation	2
5.	MCA	Computer Applications	3
6.	M.Plan.	Urban Planning	2
7.	Dual Degree [B.Tech (MAE) + MBA]	Mechanical and Automation Engineering & Management	6
8.	MBA	Business Administration	2

Ph.D. Course

Currently Ph.D. course is running in the streams of Electronics & Communication Engineering (ECE), Electrical Engineering, Information Technology (IT), Computer Application, Computer Science & Engineering(CSE),Mechanical & Automation Engineering(MAE) and Applied Sciences & English(ASH). To enable and nurture relevant research endeavours the University has bagged research grants from various external agencies. The researchers in the University, both Faculty and students are involved in industry relevant research and consultancy in various areas of social relevance. The University is in the process of developing various advanced labs & centres, which would serve as the premier source of academic information for the University community through its rich collection of academic books, journals and documents with innovative technology and physical facilities.

Transforming students into Leaders through Meticulous Programs

Apart from the regular academic programs, the University has adopted a Choice Based Credits System CBCS with the option to choose tracks for interests for women students with multiple exit options. These tracks include- Project Track, Entrepreneurial Track, Research Track, MOOC track.

The syllabus of the programs is the latest and as per the industry requirement. Very innovative projects like women and society, business entrepreneurship, and others under the generic open elective category are added in the curriculum to give the students a variety of subjects to select for their overall and holistic development.

Students are highly involved in *Community Outreach Programs* including Swachh Bharat Abhiyan, Unnat Bharat Abhiyan, Electoral campaigns, and others. University is closely working with government schools to promote STEM education among young girl students. A unique program of Vigyan Jyoti under the department of Science and Technology goal is executed to create gender-enabling S&T ecosystems and to inculcate scientific temperaments among school girls.

Students also take part in various *curricular and extra-curricular activities and competitions* within the university and outside. On several occasions, they represented the university and won prizes and medals to bring laurel to the university. The University students are encouraged to participate in various National and International events, competitions including Hackathons and won various Awards / Prizes. The University has seven Technical membership societies like ACM chapter, IEEE, OSA, etc., fourteen institute level societies and four clubs related to various Technical, Art and Culture and Environment activities.

For *industry exposure*, the University has signed several MoUs with leading industries including *IBM, CISCO, NASSCOM Foundation, EATON*, and several others so that students can get advantages of the latest trends and techniques adopted by the industry. Through these MoUs and linkage, students become better industry-ready professionals before the completion of their programs.

Also, University has received financial and mentorship support from International organizations like GiZ, Germany, Nexus, the USA to promote innovation, entrepreneurial culture among girl students. Workshops, boot camps, seminars, pitching sessions are conducted regularly for converting the emphasis from job seekers to job providers. In the last financial year i.e. 2020-21 amid the pandemic, IGDTUW-Anveshan Foundation, the incubation Centre has become NIDHI-TBI by Department of Science & Technology, Government of India with a support of INR Four Crores Fifty Lakhs.

The University has seven Technical membership societies like ACM chapter, IEEE, OSA etc., fourteen institute level societies and four clubs related to various Technical, Art and Culture and Environment activities. The university also motivates students to become Entrepreneur through DST recognized IGDTUW - Anveshan Foundation.

For further details, please visit: www.igdtuw.ac.in

A University envisioned, to impart high quality technical education to female students, provide them with world class facilities and nurture them with encouraging surroundings, has resulted in the emergence of the prestigious Indira Gandhi Delhi Technical University for Women. The University is working towards gaining status of an internationally recognised Engineering institute under the guidance of Hon'ble Vice Chancellor Dr. (Mrs) Amita Dev. It is because of her vision that IGDTUW is seen as a young women Technical University with immense potential to be recognized as one of the pioneering academic institutions of the country in due course of time.

VISION

- To make India a Knowledge Society and Knowledge Economy by empowering the women of our country through education in Engineering, Science, Management and Technology.
- To become one of the top technical Universities in the country known for its value based, quality technical education supported with industry relevant research, with focus on environmental and social issues.

MISSION

- To foster an environment for excellence in professional education and ensure active participation of women in the field of Engineering, Science, Management and Technology, while striking out a work-life balance.
- To start new professional courses for women in sun-rise disciplines and forge alliances with industry to impart industry relevant education.
- To emancipate women through pursuit of knowledge enabling them to gain equal status in society through realization of their rights and responsibilities.
- To develop sustainable systems and state-of-the-art infrastructure to enable the Indian women to become the future Leaders, managers, Researchers and productive team players in the field of science, engineering, technology and management.

Awards and Accolades

A University or any organization is known not by the Brick and Mortar structure but by the people that guide, mentor, constitute and contribute to the aura of that institute ably through leading by example. We invite you to witness the journey of Accomplishments of our Hon'ble Vice Chancellor which is undoubtedly a great source of motivation and inspiration for all the members of the IGDTUW family.

Dr. (Mrs) Amita Dev is recognized as a renowned Academician and an able Administrator par excellence not only in India, but also abroad. She has been honoured with several prestigious Awards and Titles for her contribution to various streams of Academics and Administration. During the uncertain times of COVID-19, the University left no stone unturned and strived hard in achieving the success by adopting and shifting to newer means of imparting education and conducting events online.

1. As a matter of pride, the University ranked **2nd under Women Colleges and Universities and in "Atal Ranking of Institutions on Innovation Achievements (ARIIA)-2020"** awarded by **Hon'ble Vice President of India** on 18th August, 2020.

2. **77th position in the overall “World’s Universities with Real Impact (WURI) Ranking”, as the Innovative Universities for 2020** has been another feather in the cap for achievements for IGDTUW. The University also bagged **21st position in the special category “Entrepreneurial Spirit of WURI ranking, 2020”**.
3. IGDTUW stood 19th among the **“Top 25 Engineering Colleges/Universities of India”** and also bagged a position under the category **“College with the best value for Money.”** (Source: INDIA TODAY Survey, June 2020)
4. In **“The Times Annual Engineering Institute Survey-2020”**, IGDTUW bagged following remarkable ranks and positions:
 - Ranked **“3rd in the Top Emerging Institutes”** – Placement Category
 - Ranked **“4th in the Emerging Engineering Institutes”** – Research Capability Category
 - Ranked **“Among top 5 Engineering Institutes”**- Emerging Category
5. IGDTUW is the only government university in India which has been selected by QS I QUAGE for the award of **“E LEAD INSTITUTE for E-Learning Excellence for Academic Digitization”**
6. IGDTUW has been awarded with a **“Diamond University (Diamond Rating)”** by QS I-Gauge (Indian College & University Rating)
7. IGDTUW has been conferred **“Sushma Swaraj STREE Shakti Samman”** on 25th September 2020 for its vision and outstanding commitment for Women Education and Women Empowerment.
8. Awarded the University of The Year-2021(1-10 years) by the FICCI Higher Education Excellence.
9. The World Times Higher Education **Impact Rankings 2021** has ranked IGDTUW **101-200 for SDG-4 and 5 among all universities of the World i.e for Quality Education and Gender Equality**. For SDG-1 No Poverty, IGDTUW has ranked 401 and for SDG-17, Partnership for the Goal, it has ranked 601-800 among the World universities.

Research and Collaborations

In the last couple of years IGDTUW has given a special impetus on building research facilities augmented by funding from various National and International funding agencies. Many new labs have been added in various departments during this year. Resources have been generated by the faculty through sponsored research projects which have added value to their Research and Technology.

The University has been actively involved in collaborative programmes with National and International Organizations/Universities to remain at the forefront in Scientific and Technological research and development and to share the knowledge for mutual benefits on various socio-economic issues.

IGDTUW is currently partnering with several Universities to promote various forms of Academic Collaborations with institutions as well as Industry for improvement in performance of the students, knowledge updating of faculty, bridging gaps between academia & industry, better placements and higher studies opportunities for students. Few of our prestigious collaborations worth mentioning are:

1. Department of Science and Technology has selected IGDTUW for building Centre of Excellence in Artificial Intelligence.
2. Collaboration with United Kingdom Research and Innovation, Centre of Ecology & Hydrology, CEH, UK
3. NASSCOM & CISCO for setting-up of thingQbator Innovation lab
4. M/s. Flour Daniel for setting-up of Turning Lab under CSR activities
5. National Ping Tung University [NPTU], Taiwan for research collaboration, student and Faculty Exchange etc.
6. Maykop State Technological University, Maykop, Russia for collaborative research, exchange of faculty, students, researchers etc and jointly organizing Symposia, Seminars and Conferences.
7. Cyber Peace Foundation for setting up of Centre of Excellence in Cyber Security.
8. EATON Foundation for Internship placement and Scholarships to the students etc.
9. MoU with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
10. MoU with IBM India Private Ltd. for Academic Growth and Technological Advancement
11. MoU signed with 'Fair Conditioning' for designing the course curriculum of B.Arch. program by inclusion of pedagogy, tools and techniques of energy efficiency and Passive active cooling techniques.
12. Women in Big Data™ (WiBD) is a global not-for-profit global organization out to champion the success of Women in Big Data and to increase women's representation in Big Data – launched in association with IGDTUW
13. MoU with Amazon signed by Department of Information Technology
14. MoU with Enobble IP for facilitating activities pertaining to intellectual property to staff and students and Incubatees.

Collaboration with Delhi Govt. Departments

- ❖ Delhi Subordinate State Selection Board (DSSSB)
- ❖ MoU with Municipal Corporation of Delhi (MCD)
- ❖ Training of Delhi Police Staff on Cyber Security & Cyber Crime
- ❖ MOU signed with Forensic Science Lab (FSL) Government of Delhi for internship / placement offers and arena of research in cyber forensics and cyber crimes and investigations.

CSR INITIATIVES

Indira Gandhi Delhi Technical University for Women (IGDTUW) has been a part of Unnat Bharat Abhiyan as a Participant Institute (PI), under the dynamic leadership of Dr. (Mrs.) Amita Dev, Honourable Vice Chancellor, IGDTUW. Since beginning, she has taken keen interest in establishing the University-Community link to ensure that the benefits of such interventions reach directly to the grass root level. Under this initiative, the University has adopted following five villages in Civil Lines Subdivision area of Central Delhi:

- Kamal PurMajra
- JhadodaMajra
- Burari Village
- SalempurMajra
- Jagat Pur Village

Various activities are being implemented in the adopted villages with the help of Local administration, community and schools.

The Career Trajectory

The Training and Placement Department facilitates the Campus Drives and offers placement and internship utopia for our students. Retaining and revitalizing the past glory, the highly energetic

There has been an exponential growth and the current placement statistics stand true to this testament. IGDTUW students, faculty and staff expects that this trend will continue throughout the placement season and companies will continue to reiterate the ever-increasing confidence on IGDTUW.

The Placement Season for the batch 2021-22 started with the high note and more than 83 companies have visited the campus with total number of offers for IGDTUW girls of circuit branches, i.e CSE, IT, ECE as 563 for the academic year 2020-21. 327 Full Time Offers, including the 93 pre-placement Offers and 53 dual offers has shown that even the tough testing times of Covid -19 had no impact on the placement season at IGDTUW.

In addition to this 155 summer internship offers for third year girls and 134 offers for six month internship have been the icing on the cake of the girls, who again did it this year too!!!.

The highest CTC of Rs. 59.45 Lakhs from Google and internship package of Rs.1.6 Lakhs per month from Uber were the highest in each category.

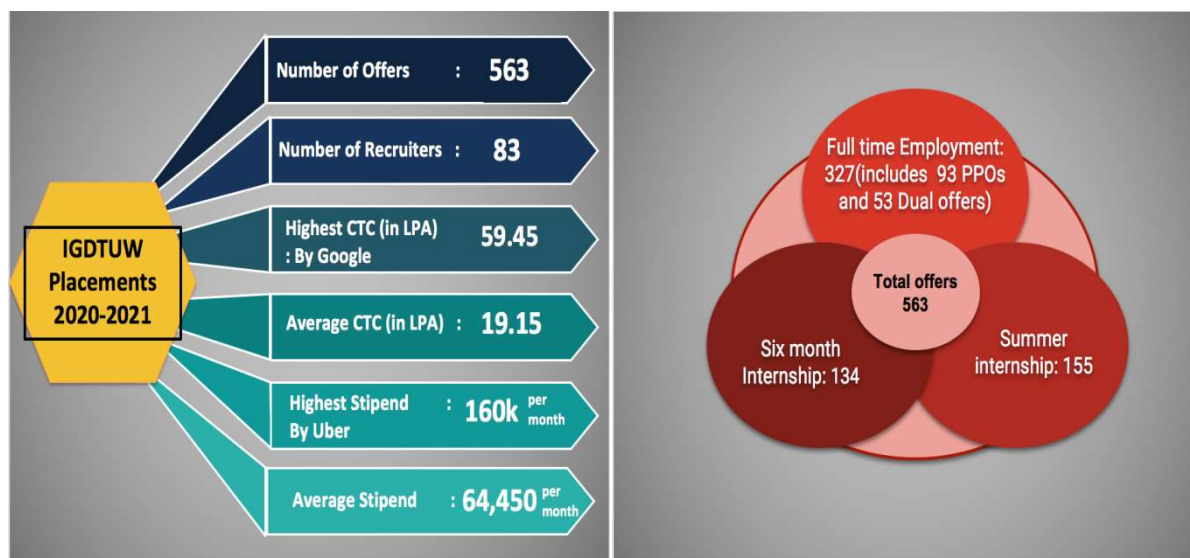
It is a matter of stupendous pride to share that compared to the last year, there has been a rise in average CTC from 13.3 Lakhs per annum to 19.15 Lakhs per annum and a rise in highest package from 43.3 Lakhs to 59.45 Lakhs.

The university is extremely proud to partner with some of the leading names such as Atlassian, Google, Microsoft, Intuit, Uber, Goldman Sachs, Deutsche Bank, Morgan Stanley, Walmart, Flipkart, Salesforce, Adobe, American Express, Volvo, Expedia, Cisco, GE, Nestle, Siemens, Accenture, Myntra, DELL etc.

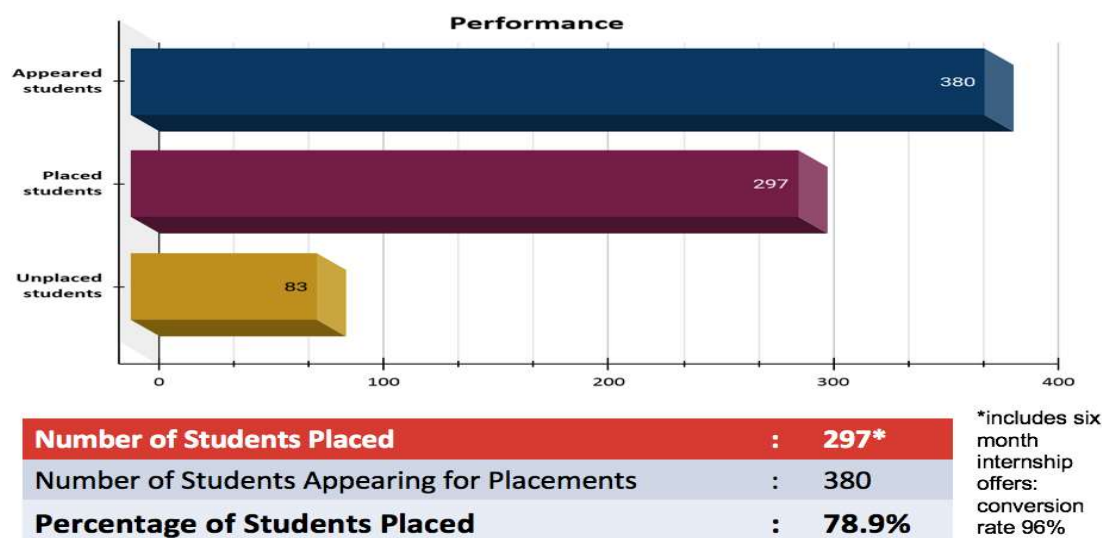
New companies that visited us for the first time this academic year-2020-21 are: Atlassian, BNY Mellon, Zomato, Adidas, Wells Fargo ,Standard Chartered, Grant Thornton, Confluent, Athenahealth, Barclays, AppDynamics, Testbook, Ericsson India , Analog Devices Marvell Semiconductors, DE Shaw , JTG , Teradata and PhonePe.

The huge number (93) pre-placement offers bagged by students in these pandemic times and new recruiters constantly coming to the campus to hire shows the promise and reputation that the students have built for the University.

Atlassian offered package of 51.5 CTC, came for the first time and hired 9 students,the highest number from any university in India in this season. Microsoft IDC has offered 20 Full time and 40 summer internships-2021 offers.



Percentage of Students Placed




Memberships and Social Initiatives

The University has established chapters with memberships available for seven Technical societies like ACM, IEEE, OSA etc., fourteen Institute level societies and four clubs related to various Technical, Art, Culture and Environment related activities. The University also motivates students to become Entrepreneur through DST recognized IGDTUW - Anveshan Foundation. IGDTUW believes in holistic development of students and shows acute concern in inculcating social responsibilities. In line with Unnat Bharat Abhiyan, IGDTUW has adopted five villages to spread digital literacy, health and sanitation awareness, etc. Since last year University is working for Vigyan Jyoti Project of DST with the mandate to promote and create awareness on STEM Education among the girl students. This Project has fetched an overwhelming response from Government Schools where students of Class 10th came for training during summer breaks and walked out confidently with a self-made working robot.

One of the best things about University/College life, undoubtedly, is getting to explore things other than academics. University societies are one such platform which help students to engage in different activities and help them to further hone their skills through vigorous participation in various creative fields of their interest.

There are innumerable societies present in IGDTUW which provides a holistic environment for girl students to engage and participate in the activities of their interest. IGDTUW believes that these societies bring in a platform for Women power and Women empowerment among its girl Students and enhance their personal growth with exemplary work apart from just academic achievements.

By being a member of any society, IGDTUW Students are expected to attend meetings, take part in discussions with other members, suggest ways on how to improve work quality, etc.



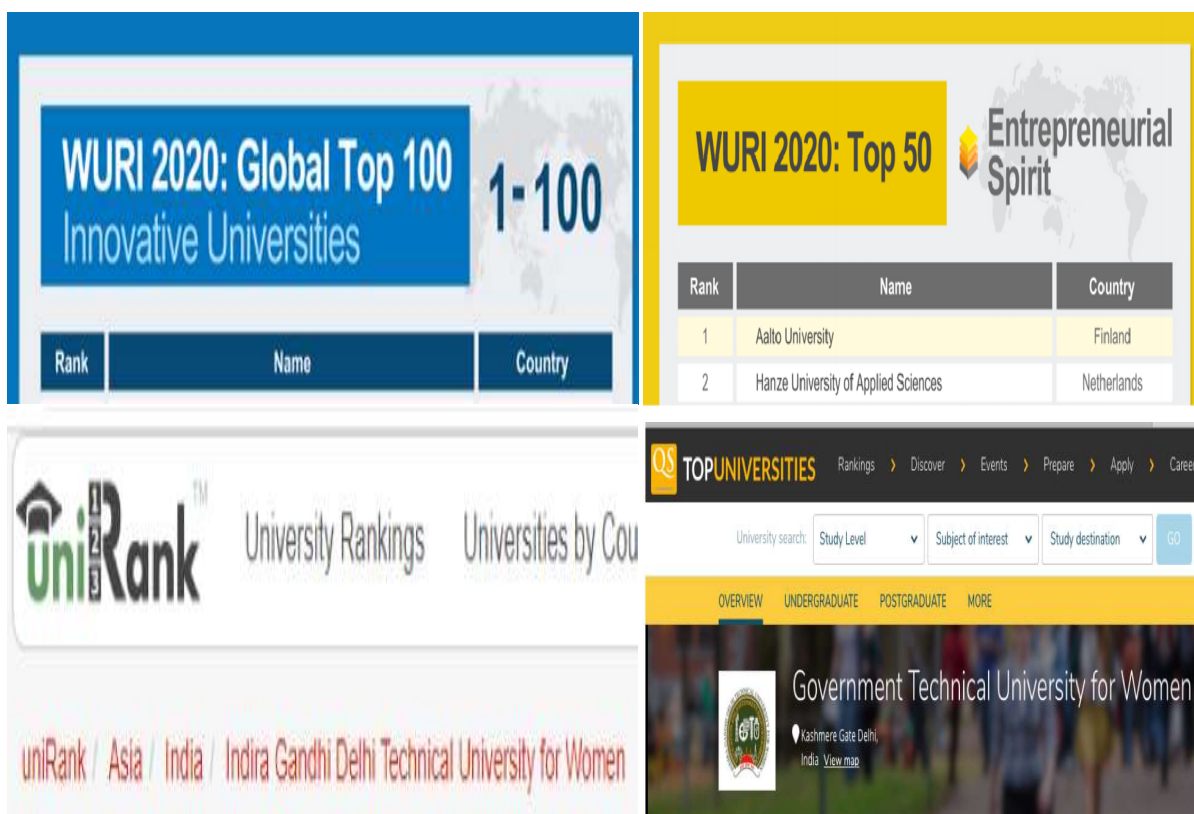
They also bear the responsibility to organise various events and fests throughout the year. Society members also visit other Universities/colleges and participate in the competitions being held there to represent their respective colleges at different levels. Moreover, societies also help to provide good exposure to the students as they are associated with various other reputed organisations and individuals, who can guide them efficiently.

Apart from this, students who are not members of a society can also bring out their creativity and showcase their talent in the various competitions, fests and events organised by a society in the University premises.

Overall, the University society experience is fun as students form new friendships, get to meet like-minded people, and most importantly enjoy being part of something that helps them to learn practical things from outside the books as well as enhance their

INTERNATIONAL RANKING AND QS RATING

- Ranked 77th position in the overall "*WURI :Innovative Universities for 2020*".
- Ranked 21th in the special category "*Entrepreneurial Spirit*" of WURI ranking, 2020.
- IGDTUW ranks at 645th place by uniRank 2020.
- Ranking by uniRank™ : The leading international higher education directory and search engine featuring reviews and rankings of over 13,600 officially recognized Universities and Colleges in 200 countries.



QS RATING :

IGDTUW awarded with a Diamond University through rigorous and independent data collection and analysis against performance metrics as set out in the methodology by QS I-Gauge (Indian College & University Rating)



Times Higher Education World Impact Rankings 2021 are the only global performance tables that assess universities against the United Nations' Sustainable Development Goals (SDGs). IGDTUW has been constantly working on all academic and social front, during pandemic which has helped it to be ranked between **101-200 for SDG-4 and 5 among all universities of the World i.e for Quality Education and Gender Equality**. For SDG-1, No Poverty, IGDTUW has ranked 401 and for SDG-17, Partnership for the Goal, it has ranked 601-800 among the World universities.



FS-ISAC Building Cyber Security Scholarship 2020

Ms. Monika Kumari, M.Tech - IT (ISM) is one of the 14 women engineers who has been awarded World Wide Prestigious Scholarship FS-ISAC (Financial Services Information Sharing and Analysis Center) Building Cyber Security Scholarship 2020 of worth USD10,000 (USD Ten Thousand only). FS-ISAC headquarter in US and Offices in UK and Singapore is the global cyber intelligence sharing community solely focused on financial services


CYBER SECURITY

Award for M Tech student, first from India

GAYATHRI MANI @ New Delhi

MONIKA Kumari, a second-year M.Tech student of Indira Gandhi Technical University for Women (IGTUW), became the first woman in India to get the Financial Services Information Sharing Analysis Center (FS-ISAC) Cyber Security scholarship worth USD 10,000.

The scholarship was launched by FS-ISAC, an industry consortium dedicated to reducing cyber-risk in the global financial system, back in 2016 to support financially and mentor young women in the field of cyber security.



Every year FS-ISAC selects 14 women throughout the world and mentors them to reach great heights in their career. Monika is the first from the city to bag this illustrious scholarship for budding social security enthusiasts.

Sharing her experience, the 25-year-old student of Information Security Management said, "I am very happy and overwhelmed by this development. It is personally a great experience for me as FS-ISAC is a recognised platform on the global stage. Apart from the scholarship, I also get a chance to go abroad and work under great mentors

excelling in the field of cyber security."

While the Financial Services Information Sharing Analysis Center is based out of the United States of America, it has offices in the United Kingdom and Singapore as well.

"By bagging the scholarship, Monika has not only made our university proud but has also brought laurels to the entire nation as this particular scholarship is of global relevance," said professor Amita Dev, vice-chancellor of IGTUW.

"It is a matter of great pride for the entire university to see our students making a mark at not only the national level but international level as well," she further added.

Global outreach

The scholarship was launched by FS-ISAC, an industry consortium dedicated to reducing cyber-risk, back in 2016 to support financially and mentor young women in the field of cyber security. Every year FS-ISAC selects 14 women throughout the world and mentors them.

GLIMPSE OF UNIVERSITY'S LATEST EVENTS

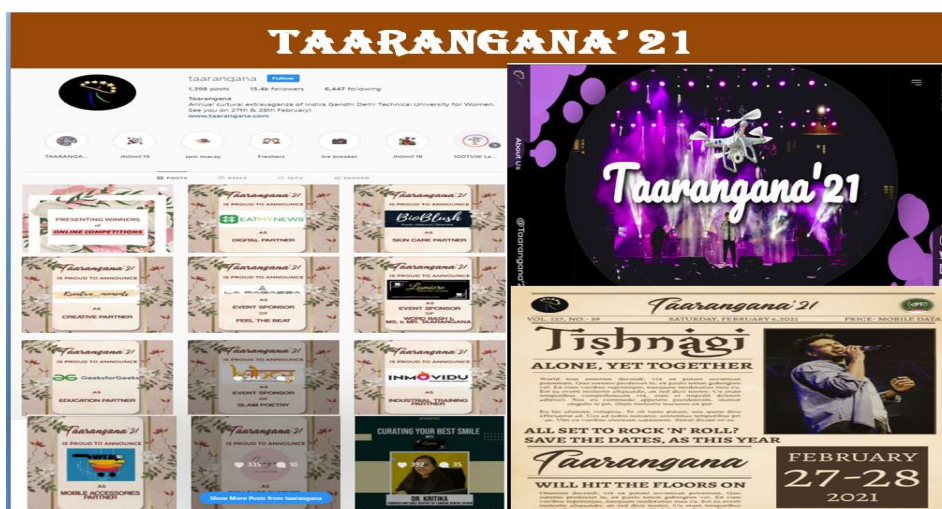
'EDUCATION MENTORING PROGRAMME' launched by Delhi Chief Minister on 20th March 2021 at IGDTUW designed and dedicated to the Delhi School going girls and will help unleash their immense potential in the field of STEM (Science, Technology, Engineering and Mathematics). Sh. Manish Sisodia, Hon'ble Deputy Chief Minister, Sh. Udit Prakash Rai, IAS, Director, Education & Sports, Sh. H.P. Sran, IAS, Special Secretary, Vigilance along with Vice Chancellors and representatives of various Delhi Universities were present in the inaugural event. Honorable Dy. Chief Minister, Sh. Manish Sisodia ji emphasized on 'Das Minute DeshKe Naam' slogan during his speech. In the first phase 25 girls of IGDTUW are going to work as 'Mentor Leaders' and another 250 girls as mentor are going to handhold approximately 1000 school girls in the front line. Later the program will be targeting 10000 to 15000 school girls with the help of the students of other Delhi Government Universities.



FELICITATION CEREMONY, 4th Felicitation Ceremony organized by the Training And Placement Cell, IGDTUW, for the batch 2021 was held on 10th April, 2021, at IGDTUW Auditorium for giving a warm and encouraging welcome to our new and incoming TNP student team. The TNP Student team of Batch 2020 and 2021 celebrated the success and achievements of their hard work of reaching out to national and international firms.



TAARANGANA 2021 celebrated on 27th– 28thFeb. 2021 was started with Theme, TISHNAGI- ALONE, YET TOGETHER, speaks volumes about how much we reminisce our bygone days and adds hope that soon things will change for the good



Innervive 2020

Innervive, the Annual Technical Festival of Indira Gandhi Delhi Technical University for Women, is a true mixture of technology, inspiration, and innovation. During the ongoing COVID-19 pandemic, Innervive'20 went online.

The theme of Innervive'20 was Error 404: Tech Not Found, to celebrate the technologies that never saw the light of the day, ideas that never came to fruition. Innervive'20 had a whole treasure trove of fun and learning events of various categories. There were Computer Science and Engineering or Information Technology events, Electronics and Communication Engineering events, Mechanical and Automation Engineering events, BBA events, and informal events.

Innervive'20 conducted various online events such as poster making, web and app development, graphic designing, and slogan writing, for both college as well as school students on the theme COVID-19 to spread awareness. Innervive Hacks and Data Hackathon were conducted to develop ideas into prototypes tackling real-life problems. All in all, this two-day festival of technology became a big success loaded with fun and tech that went off and created unforgettable memories for all who were a part of it.



- ❖ Department of IT, IGDTUW organized One Week FDP on Artificial Intelligence and Speech Technology (AIST) in technical collaboration with IBM from 17th to 21st August, 2020.
- ❖ Department of Architecture and Planning, IGDTUW organized Faculty Development Programme (FDP) on "Thoughtful Cooling" sponsored by DST, dated 16th - 20th September 2020.
- ❖ Department of Electronics and Communication Engineering, IGDTUW organized AICTE-ATAL sponsored Online One Week Faculty Development Program on Response Effectiveness, Organizing Self, Attitudinal Shift, Decision Making (ROAD) from 7th to 11th September, 2020. There were 183 participants from different colleges from different parts of the country which included faculty participants, industry personnel, research scholars, project associates, post graduate and under graduate students. Dept. of IT, IGDTUW organised one-week FDP sponsored by ATAL, AICTE on "Deep Learning and Artificial Intelligence" from 21st to 25th Sept. 2020
- ❖ Department of Architecture & Planning, IGDTUW Delhi, organised 3rd online lecture series- "Architects on Architecture", in association with IGDTUW-Anveshan Foundation on 24th October 2020. Ar. Abha Narain Lambah was invited as the eminent speaker of the event.
- ❖ IGDTUW in association with Anveshan Foundation organised Session on Modern Life Style, Common Orthopaedic Ailments, 30th Oct., 2020
- ❖ Dept. of Architecture and Planning, IGDTUW in association with Anveshan Foundation organised a session for their online series 'ARCHITECTS ON ARCHITECTURE' on 30th Oct., 2020
- ❖ 'A talk Gender Sensitization' by Prof. Sabiha Hussain, Director, Sarojini Naidu Centre for Women's Studies, Jamia Millia Islamia, on 31st Oct., 2020
- ❖ IGDTUW conducted a seminar on Resume Building and Self Selling by Mr. ANSHUMALI SAXENA, Institutional Builder, Leader - Mentor, Sales - Marketing - Branding Innovator on 6th Nov. 2020
- ❖ Department of Computer Science and Engineering, IGDTUW conducted a Webinar on Infant Brain MR Images Analysis on 12th Nov., 2020
- ❖ Department of Architecture and Planning, IGDTUW organized Exhibition of their work on "Emerging Phenomena & Design Strategies in Architecture" on 20th November 2020.
- ❖ The Department of CSE is organizing an FDP on "Machine Learning Applications in Image Processing" of CSE from 23rd-27th November 2020.
- ❖ IGDTUW Anveshan Foundation in association with GIZ, Germany is conducting 2 Day Online Bootcamp on 'Good Health: Key to Entrepreneur Success' in collaboration with SwasthAayu Ayurvedic Wellness on 27th and 28th Nov, 2020
- ❖ Dept. of Management, IGDTUW organised Personal Branding and Cracking Your Placements held on 6th Dec., 2020
- ❖ IGDTUW Anveshan Foundation in association with GIZ, Germany is conducting *'CEO MEET II'* on 27th December, 2020.

- ❖ Dept. of Computer Science, IGDTUW presents Expert Talk on "Engineering in Internet of Things " by Eminent Speaker: Prof. Bhaskar Krishnamachari, Professor, University of Southern California, United States on 8th Jan., 2021.
- ❖ IGDTUW organised with Knowledge partner of Vigyan Jyoti Scheme, DST a Virtual Lab Visit and Hands on Session on Analog and Digital Electronics for Jawahar Navodaya Vidyalaya, Delhi on 14th Jan., 2021
- ❖ IGDTUW Hostels in association with Anveshan Foundation and ASH Dept organising a session on "Ayurveda Dietary rules for Good Health". The esteemed speaker of the session is Dr. Reena Arora, Ayurvedic Consultant lifestyle support, 17th Jan 2021 at 3:00 PM
- ❖ IGDTUW AI Club in collaboration with Women in Big Data- India Chapter organised a Two days workshop on Introduction to Data Analysis Using MS Excel on 22nd & 23rd Jan., 2021. in online/blended mode
- ❖ IGDTUW in association with Anveshan Foundation and ASH Department, Successfully conducted talk on Precautions to be taken for COVID-19 and reopening of the University on 23rd Jan., 2021.
- ❖ IGDTUW organised a session on "New Education Policy 2020" held on 29th Jan., 2021 at 11.30am on WebEx platform. The resource person of the session is Prof. N.V. Varghese, Vice chancellor, NIEPA
- ❖ IGDTUW (Dept. of Computer Science) presents Webinar on 'Learning with Weak Social Supervision for Fake News Detection' by Kai Shu, Assistant Professor, Department of CS, Illinois Institute of Technology, Chicago, US on 29th Jan., 2021.
- ❖ IGDTUW Anveshan Foundation in association with GiZ conducted CEO Meet-III on 'Delhi Start-up Mission - Core Competencies, Opportunities and Challenges' on 30th Jan., 2021 (online webex platform).
- ❖ Department of Management in association with Samanvay - Economics and Research Society of IGDTUW, organised a discussion on the topic – "Deciphering Budget- 2021".
- ❖ Department of CSE, IGDTUW conducted One week online FDP on "Machine Learning and Deep Learning Applications" during 1st – 5th February 2021 (In Online Mode)
- ❖ IGDTUW Anveshan Foundation in association with GIZ, Germany conducted 'Workshop - Fly High: DIY Drones using 3D Printing ' on 20th Feb., to 27 March, 2021.
- ❖ IGDTUW Anveshan Foundation conducted a Mentorship Sessions for Start-Ups: Series 21 'Workshop –How to become a successful Woman Entrepreneur' on 11th April, 2021 by Prof. Avijit Banerjee, Director, GLF Business Schools, Kolkata
- ❖ IGDTUW Anveshan Foundation conducted a Mentorship Sessions for Start-Ups: Series 22 'Workshop – Concept of M&A and Startups leveraging M&A route on 18th April, 2021 by Ms. Nimisha Jain, Associate Manage, Transaction Advisory, Ernst & Young Global Ltd.

INTERNATIONAL CONFERENCES

❖ First National Conference- NCIMAE 2020

Department of Mechanical and Automation Engineering, IGDTUW organized its first National Conference "Innovations in Mechanical and Automation Engineering" on 18th September 2020. Hon'ble Atul Sobti Director General of scope was the Chief Guest and plenary session was conducted by Guest of Honor Prof DtmrituNedelcu from Romania. Dr. ING. Daniel Hahn, Germany; Prof. S. Maji DITE, Delhi and many prominent researchers and academicians delivered their expert talks on latest trends, works and challenges in upcoming technology of Mechanical Design, research and development and industrial exposure. Students/Research scholars/ Faculty and various industrial researchers participated in the conference and made it a huge success.



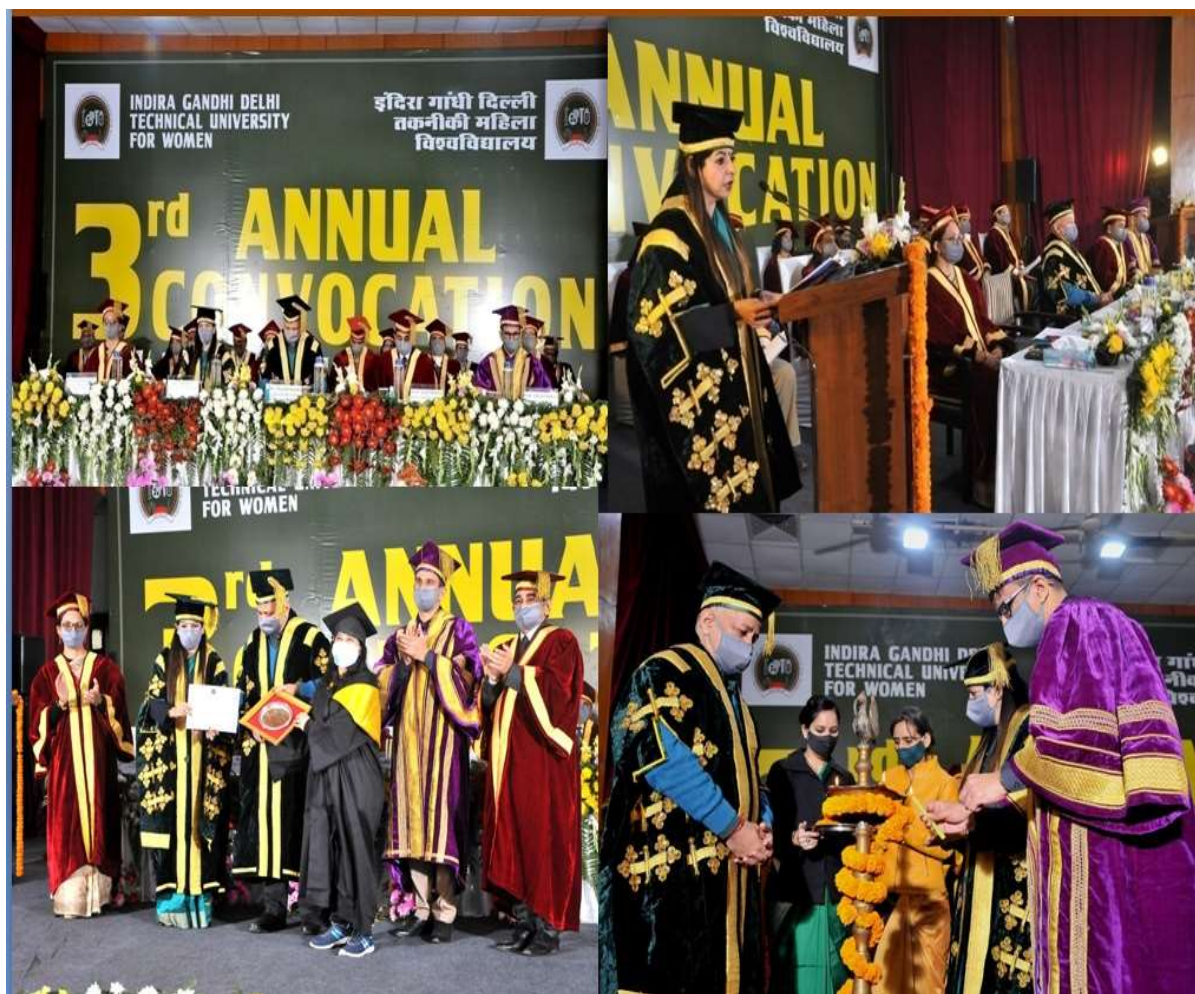
❖ Third International Conference- AIST 2021

Indira Gandhi Delhi Technical University for Women organized a two-day International Conference on Artificial intelligence and Speech Technology. The event held on 12th and 13th November 2021 was witnessed and guided by many eminent guests and speakers from International levels such as Germany, Japan, France, Netherlands, etc. The inauguration of the event was held in the prestigious presence of honorable Vice Chancellor Dr. (Mrs.) Amita Dev and the Chief Guest Shri. Parimal Kumar, Scientific Advisor to Chief of Integrated Defense Staff, Ministry of Defense, GoI. The honorable Vice-Chancellor of IGDTUW, being an active researcher in Speech technology herself, addressed the crowd and spoke about the importance of AI and Speech technology in subsequent times, and emphasized the reliability of AI and ST in our day-to-day lives. The Chief Guest of the event, Shri. Parimal Kumar, Scientific Advisor to Chief of Integrated Defence Staff, Ministry of Defence, GoI conveyed ample applause to all the esteemed researchers and congratulated them for their generous efforts in the area of Artificial Intelligence and Speech Technology. He concluded by encouraging future graduates and students of IGDTUW to become capable enough to generate occupation and undertake the enterprise. Other Keynote speakers were Dr. Satoshi Nakamura, Honorary Chair, from Japan, Dr. Rajkumar Buyya, Professor, University of Melbourne, Australia, Dr. Tanja Shultz, Professor, University of Bremen, Germany, Dr. Laurent Besacier, Principal Scientist, Naver Labs Europe, France, Dr. S Sakti, Professor, JAIST/NAIST, Japan, Guest of Honor- Dr. Bindu Narayan, Associate Director (Data Science and AI), Ernst & Young Global Limited. Prof. S. Umesh, Professor, IIT Madras. A total of 55 Research papers were presented by various esteemed authors was presented. The event came to its periphery with a zeal to research and develop with higher impulsion.

THIRD CONVOCATION 2020

Indira Gandhi Delhi Technical University for Women, Delhi celebrated its third convocation ceremony on 28th December 2020 marked open by the Deputy Chief Minister Shri Manish Sisodia was the Guest of Honour of the Convocation. The ceremony was graced with the presence of Dr. Amita Dev, Vice Chancellor, IGDTUW. The Convocation graced through online mode by the Hon'ble Governor of Delhi and the Chancellor of the University Shri Anil Baijal, the UGC Chairman Shri D.P. Singh, Prof. R.K. Kale, Chairman, Board of Management conveyed his best wishes for the students. Also, in attendance were other dignitaries from the academic world, industries and the Govt. of NCT of Delhi. The Convocation began with a majestic and grand academic procession.

Total 408 students graduated including 359 undergraduates, 119 post graduates, and 9 Ph. D Fourteen (14) students were awarded various medals including Two (02) Chancellor Medal, Ten (11) Vice-Chancellor Medal and 01 Exemplary Performance Silver Plaque on this glorious occasion for their outstanding academic achievement.



2ND ALUMNI MEET AND INDUSTRIAL NETWORKING

Indira Gandhi Delhi Technical University for Women organized its 2nd Alumni Meet and Industrial Networking was held on 28th December 2020 on line and blended mode in the Auditorium. Mr. Sandeep Ghai, the Senior Director Human Capital at the United Health Group and Mr. Ajay Goel, Vice President, Altran as the Guest of Honors physically present at the campus along with HRs of Salesforce, Intuit, SAP Labs and American Express joined us online to share their esteemed thoughts, more than 70 attendees online and approx. 40 participants at the campus, this event welcomed dignitaries from various renowned MNCs and alumni of the University dated back from as long as the very first batch of IGIT to the batch of 2020. TNP cell 2020-2021 were highly applauded and appreciated by all the alumni and the dignitaries present in the event. Prestigious Alumni Awards were also presented to various passed out students of the University who have shown extreme support for the University and have made the University immensely proud.

The Alumni **AWARD FOR EXCELLENCE** was presented to alumni of the first few batches of the university who are also the current faculty of the university:

- ❖ Dr. Mohona Ghosh,
- ❖ Dr. Shipra Aggarwal,
- ❖ Dr. Pooja Bhati ,
- ❖ Ms. Deepti Chhabra

The **OUTSTANDING YOUNG ALUMNUS AWARD** was presented who joined us from all over the globe, for their outstanding involvement and achievement in their post-graduate education, community contributions and career advancement to

- ❖ Ms. Soumya Gupta,
- ❖ Ms. Shrishti Priya and
- ❖ Ms. Sugandha Arora

The **RISING STAR AWARD** was presented to recognize her significant contributions to greater society through professional work:

- ❖ Ms Deeksha Dixit



UNIVERSITY LATEST COLLABORATIONS

COLLABORATION WITH DELHI GOVT. DEPARTMENTS

- Delhi Subordinate State Selection Board (DSSSB)
- Dept. of Vigilance.
- MoU with Municipal Corporation of Delhi (MCD).
- Training of Delhi Police Staff on Cyber Security & Cyber Crime.
- MOU signed with Forensic Science Lab (FSL) Government of Delhi for internship / placement offers and arena of research in cyber forensics and cyber crimes and investigations

PRESTIGIOUS COLLABORATIONS

- IGDTUW has been selected by DST for building Centre of Excellence in Artificial Intelligence.
- United Kingdom Research and Innovation, Centre of Ecology & Hydrology (CEH), UK.
- University has received approx. Rs.60 Lakhs of equipment from NASSCOM & CISCO for setting-up of thingQbator (Internet of things Innovation Lab) in IGDTUW.
- University has received approx. Rs.22 Lakhs of equipment from M/s. Flour Daniel for setting-up of Turning Lab in MAE Department.
- National Ping Tung University [NPTU], Taiwan for Research Collaboration, Student and Faculty Exchange etc.
- Maykop State Technological University, Russia for Collaborative Research, Student and Faculty exchange Course and for jointly organizing Symposia, Seminars, etc.
- Cyber Peace Foundation for setting up of Cyber Research Lab.
- EATON Foundation for disbursing scholarships to the students etc.
- MoU between IGDTUW and IBM India Pvt. Ltd. for Academic Growth and Technological advancement.
- MoU signed with Enobble IP for facilitating activities pertaining to Intellectual Property to staff and students
- MoU of IGDTUW with Amazon related to the use of Amazon's Educate Services.
- MoU signed with 'Fair Conditioning' to improve the course curriculum of B.Arch. program by inclusion of pedagogy, tools and techniques of energy efficiency and Passive active cooling techniques.
- MoU with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Germany.
- Women in Big Data™ (WiBD)™ is first global not-for-profit global organization out to champion the success of Women in Big Data™ (WiBD) centre and to increase women's representation in Big Data – launched in association with IGDTUW.
- MoU with NEXUS Incubation Hub, American Centre for Incubation and Skill Development

DEPARTMENT OF APPLIED SCIENCES AND HUMANITIES

Courses Offered

**Ph.D in Physics,
Chemistry,
Mathematics and
English**

"There does not exist a category of science to which one can give the name Applied Science. There is science and the applications of science, bound together as the fruit of the tree which bears it"- Louis Pasteur

A strong high-rise building can be built only on a strong foundation, which signifies the importance of the Department of Applied Sciences and Humanities. The vision of the Department is to become a center of academic excellence for professional and higher education in Applied Sciences, Management, and Humanities along with a renowned research center with cutting edge technologies and state-of-the-art infrastructure.

The Department imparts quality education in the area of Physics, Chemistry, Mathematics, Soft Skills & Communication and Management to the future technocrats of all streams. Strong engineering background supported with sound knowledge in basic and applied sciences equips graduates with many skills that would contribute to success in their careers in academia, research and industry.



Lab Infrastructure

The Department of Applied Sciences and Humanities has highly qualified Faculty known for their academic excellence and enthusiastic R&D in thrust areas leading to a large number of research publications in reputed international and national journals. The Department has undertaken several sponsored projects funded by CSIR, DST, UGC etc. There are currently twenty registered research scholars involved in active research for Ph.D. under different Faculty members of the Department. Ten students have successfully completed their Ph.D. under the guidance of Faculty supervisors in Chemistry and Physics. The Department has well equipped laboratories with the latest equipment to support teaching and research activities for Undergraduate, Post Graduate and Doctoral courses.

The Department provides cutting edge research, innovation and education in emerging areas of Science and Technology. The Department presently has four research labs:

- **Environmental Analysis and Research Lab**

The lab is equipped for the measurement, processing and analysis of aerosols and organic pollutants in the ambient atmosphere. Research work is being carried out on emission estimates of organic compounds from biomass and fossil fuels, aerosols and volatile organic compounds in the atmosphere. Research is going on for the synthesis and characterization of a novel clay based nano-composite with its application in water and waste water treatment for removal of trace metals. The synthesised material would be patented, for which the filing is under process. Work has also been undertaken on bioremediation of trace metals in the waste water.

- **Nanomaterials and Thin Films Lab**

Research work is presently being undertaken in application oriented thrust areas of nanotechnology like gas sensing, graphene nanocomposites, solar cells, high-energy radiation detection and biosensors. Research work is being pursued on nanocomposites of graphene to evolve highly-selective room-temperature gas sensing materials. Low-cost synthesis of bismuth tri-iodide composites is also being carried out for optimizing them for high-energy radiation sensing.

Work is also being done in the field of solar cells with prime focus on NiO nanoparticles; fabrication of biosensors for various bioanalytes using nanostructured metal oxides; Nanomaterials and Conducting Polymer Composites for EMI Shielding, Biosensor and various other applications; Data Driven studies of Protein DNA interactions.

- **Digital Image and Speech Processing Lab**

The lab is equipped with Image Processing software and equipment like Matrox Image processing library and Pinnacle studio plus. The laboratory has a panoramic imaging lens and a stereo camera along with range of lenses and other optical research instruments. Currently research work is being pursued in allied areas in digital image processing like aberration estimation and removal, reflection removal, determination of optical flow and neural networks.

- **CarbonLab (Creative and advanced research based on nanomaterials)**

Presently research work is being undertaken on:

- i Fabrication and use of carbon-based materials and metal oxide nanoparticles in environmental remediation, Photocatalysis, antimicrobial activity studies, Biosensors etc.
- ii Fabrication and use of Reduced Graphene Oxide-Zinc oxide/Titanium Dioxide nanocomposites and their applications as photocatalysis and antimicrobial studies
- iii Graphene based smart nanomaterials, Quantum dots, Polymers and Graphene based smart adsorbents in nanocarrier based drug delivery system.
- iv One new lab established- 'Material Science Lab'- The lab is equipped with Fourier Transform Infra-Red Spectrophotometer (FTIR), Table top scanning electron microscope (SEM) and UV Visible Spectrophotometer etc.

Research work in Applied Mathematics is being pursued on following problems:

1. To find the efficiency of various airlines of Indian aviation industry using Data Envelopment Analysis.
2. To find the optimal solution of various allocation problems viz., Fixed charge Bulk transportation problem, Interval Programming problem and Bi-level transportation problem, promoting a sustainable environment-friendly practice for disposing wastes and minimizing pollution.
3. Various Multi-objective transportation problems.
4. To study the optimality conditions of various mathematical programming problem.
5. To establish the solution procedure for solving fuzzy mathematical problems.

Research work in English is being pursued on following areas: Currently research in the discipline of English Literature and Communication is being carried out on topics related to South Asian Literature, Feminism and Partition Studies. Interested students are welcome to explore research opportunities in the above areas along with topics related to the area of Indian Diaspora, Indian Regional Literature and Communication Studies.

Research Projects Completed/On-Going

- **"Spatio-Temporal Variability of Aerosols over National Capital Region (NCR), India"**, funded by DST, New Delhi, Total Sanctioned Amount: Rs.53 lakhs.
Principal Investigator: **Dr. Ranu Gadi.**

- **"Estimates of Indoor Air Pollutants Emitted from fuels used in residential sector of Northern India"**, funded by CSIR, New Delhi, Total Sanctioned Amount:Rs.18 lakhs.
Principal Investigator: **Dr. Ranu Gadi**
- **"Investigation on Optical Properties of Si-ZnONanocomposites"** funded by UGC, New Delhi, Total Sanctioned Amount: Rs.8.5 lakhs.
Principal Investigator: **Dr.Chhaya Ravikant**
- **"Study of surface plasmons in nanocomposite thin films"** Co-Principal Investigator DST Nanomission, funded by DST Rs.12.80 Lakhs
Principal Investigator: **Dr.Chhaya Ravikant**
- **"Multi-aperture Imaging"**, funded by DST, New Delhi, Total Sanctioned Amount: Rs.05 lakhs.
Principal Investigator: **Dr. Dinesh Ganotra**
- **"Panoramic Imaging"**, funded by UGC New Delhi, Total Sanctioned Amount: Rs.05 lakhs.
Principal Investigator: **Dr. Dinesh Ganotra**
- **"Fabrication and Application of Polymeric Nanoshots As Drug Delivery Agent For Cancer Imaging And Therapy"** Funded by DST, Total Sanctioned Amount: Rs.25 Lakhs.
Principal Investigator: **Dr. Nenavath Bhavani.**

Research Collaborations

- **Megacity Delhi Atmospheric Emission Quantification, Assessment and Impacts (Delhi Flux)**

This project is under Indo-UK. partnership to facilitate cooperation between the United Kingdom and Indian Earth System Science and Environmental Research Communities. Project is a part of Ministry of Earth Sciences (MOES) and Natural Environment Research Council of the UK. (NERC) regarding Implementation agreement on Atmospheric Pollution and Human Health in an Indian Megacity (APHH). **Prof. Ranu Gadi** is an **official Collaborator** of the project.

An MoU had been signed between IGDTUW and United Kingdom Research and Innovation, Centre for Ecology & Hydrology (CEH), UK for campaign-based measurements of pollutant fluxes (Delhi Flux) and longer-term measurements of PM₁ concentrations in Delhi (SUNRISE).



Name :
Designation :
Qualification:
Areas of Specialization:

Prof. Chhaya Ravikant
Professor and Head of Department
Ph.D (Physics) Delhi University,
M.S (Software Systems), Bits Pillani
Nanomaterials and Nanotechnology, Material
Sciences and thin Film Technologies, plasma,
Processing of Materials



Name :
Designation :
Qualification:
Areas of Specialization

Prof. Ranu Gadi
Professor and Dean (Industrial Res. &
Development and Res. & Consultancy) and
Director, Anveshan Foundation
Ph.D (Chemistry) – IIT Roorkee
Post Doctoral Fellowship (Environmental
Sciences, Lancaster University, U.K.
Atmospheric Chemistry and Climate Change,
Biomass emissions, characterization of
atmospheric aerosols (elemental, organics
carbonaceous metals), Environmental Analytical
Chemistry Speciation and Bioremediation of
priority pollutants in water/wastewater.



Name :
Designation :
Qualification:
Areas of Specialization:

Prof. Shalini Arora
Professor and Chief Warden (Hostels)
Ph.D (Mathmatics) – IIT Delhi
M.Sc (Mathematics) –IIT Delhi
Mathematical Programming, Allocation
Problems, Cambinatoria1 optimization



Name :
Designation :
Qualification:
Areas of Specialization:

Dr. Dinesh Ganotra
Associate Professor
Ph.D (Physics) – IIT Delhi
Post Doc from University of Arizona
Applied Optics, Digital Image Processing, Opical
Information Processing, Panoramic and 3-D Imaging



Name :
Designation :
Qualification:
Areas of Specialization:

Dr. Geeta Sachev
Assistant Professor
Ph.D (Mathmatics) – IIT Roorkee
M.Sc (Mathmatics), IIT Roorkee
Mathematical Programming, Nonlinear Programming



Name :
Designation :
Qualification:
Areas of Specialization:

Dr. Bhavya
Assistant Professor
Ph.D (English Literature), Univ. Of Allahabad
Business Communication, Soft Skills, Diaspora
Literature



Name :

Designation :

Qualification:

Areas of Specialization:

Dr. Bhavani Prasad

Assistant Professor

Ph.D (Chemistry) – IIT Roorkee

Post Doctoral Fellowship Zhejiang University, China

Materials Science, Nanotechnology & Biotechnology



Name :

Designation :

Qualification:

Areas of Specialization:

Dr. Surender Kumar Sharma

Assistant Professor

Ph.D (Physics) –Delhi University

M.Tech (Engineering Physics), GGSIPU

M.Sc. (Physics), Delhi University

DEPARTMENT OF ARCHITECTURE AND PLANNING

Courses Offered

B.Arch – 5 Years
M.Plan (Urban Planning) – 2 Years

The Department of Architecture and Planning commenced imparting B.Arch. course in 2015. The admission of the students is through JEE Main (Paper 2) exam. In a short span of time the Department has taken great strides in establishing a quality teaching learning environment. The course has been approved by the Council of Architecture.

The Department of Architecture and Planning of Indira Gandhi Delhi Technical University for Women also offers a 2-years Post Graduate course in M.Plan. (Urban Planning).

Its curriculum and pedagogy focuses on playing a transformative force for a more inclusive, humane, responsive and sustainable Architecture and Urban Planning through cultivation of creativity, critical thinking, compassion, and collaborative working culture.

The Department has at present seven highly qualified faculty members. All faculty members are Post Graduates from eminent Universities in India and abroad in architecture and allied fields like planning, industrial design, landscape architecture, construction management, healthcare architecture. Besides regular Faculty the Department also has outstanding and experienced visiting Faculty.

Architecture and Planning education is geared towards deepening awareness about environmental as well as social issues and realities. Besides imparting knowledge, there will also be an endeavor to create opportunities for students to engage with real life issues, so that they can reflect on their role in creating a better world.

Besides proven academic credentials, the young and dynamic faculty is also actively engaged in research in diverse fields including sustainable architecture, sustainable urban development, healthcare architecture, architectural pedagogy, human computer interface, advanced construction management, energy efficient design and user centric inclusive built environments. All the Faculty members have rich field experience too and have been involved in building projects at pan Indian level. The Faculty has authored books, which have been published by premier organizations like UNICEF and World Bank. The papers written by Faculty are regularly published in architectural journals and various reputed conference proceedings.



Regular tours to various construction sites, or sites with exemplar-built environments are an integral part of the pedagogy. New experimentations in architectural pedagogy are continuously explored. The Department strives to provide students with a rich learning experience by conducting hands-on workshops, lectures and seminars on a wide range of topics. Students are encouraged to participate in architectural events with rich support and guidance of Faculty. Students are also encouraged to participate in extracurricular activities.

Lab Infrastructure

CAD lab: The CAD Lab has 20 state-of-the-art computers with latest versions of software and operating system to develop skills of students in 2D&3D drafting and GIS Mapping. The lab also has software to assist students in climatic analysis of building designs, modelling, designing and editing software like Revit 3D, GIS Mapping etc.

Survey lab: Survey lab is well equipped with various surveying instruments which are also regularly used for off-campus survey of the sites on which design problems are based in order to develop analytical skills of students.

Carpentry, Metal work workshop: The workshop is well equipped and students are regularly given demonstrations of various joinery and construction details in timber and metal work to build deeper and nuanced understanding of behaviour of materials. Students also engage in multiple hands on activities to understand truss designs, roofing designs, compression construction techniques like bricks and stone masonry, arches and domes and tension structures like reinforced concrete

Material Museum: The Department has a well-stocked material museum, to expose students to various dimensional and behavioural properties of materials, and also challenges of their use and installation on site.

Climatology Lab: The Department has established a climatology lab and is in the process of upgrading it as well. The tools of lab are extensively used for climatic analysis of both existing and new-to-be constructed buildings, so that bio climatic comfort can be created in a cost-effective way using passive design methods.

Resource Room: A resource room has also been established in the Department having various resources in both print and model form.

M. Plan Urban Planning)

There is a strong emerging need for a paradigm of urban planning which is more gender inclusive in India, given the country's commitment to achieve Sustainable Development Goals by 2030. IGDTUW aligned to this societal need by starting the Master of Planning (Urban Planning) program in 2019. The vision of the program is to foster women urban planners who responsive to the gender differences in various domains of urban planning like housing, mobility, healthcare, recreation, livelihoods etc, and help in creating more inclusive, friendly and humane cities.

Course Pedagogy

The pedagogy aims at enhancing the professional capacities and skills of students through discussions of topical issues, innovative modes of work and new professional responses grounded in the local context. Students engage in intensive field work and are exposed to multiple theories, methodologies, skills and techniques, so that their planning skills are fostered through real life challenges. Many relevant courses like Water Sensitive City Planning, Women and Habitat, GIS, Sustainable Development etc are taught in great detail to nurture a nuanced understanding of sustainable urban planning in students.



Students' discussion with the Faculty and officials at the Pataudi Municipal Committee



Students and Faculty interacting with the women self-help group members at Pataudi



Students and Faculty exploring the urban character of city



Students discussing the course of action at a field trip

GIS Lab

In fully equipped GIS Lab, students learn to process geospatial data from satellite imaging, aerial photography and remote sensors to create accurate maps of the urban conglomerates using remote sensing software. They also learn to use various modelling and predictive techniques for comprehensive and complex analysis and assessment of the ground situation. This prepares them to develop more scientific, evidence based decision making skills to create more thoughtful, sustainable and scientific urban landuse plans.

Collaborations and Projects

In order to give students a richer and meaningful exposure to real life scenarios, IGDTUW is actively working for engagement with various civic bodies in Delhi like South Delhi Municipal Corporation (SDMC), North Delhi Municipal Corporation. The students intern in various urban planning organizations like Town and Country Planning Organization, Delhi Development Authority, INTACH, State Development Authorities etc.

(NDMC) and East Delhi Municipal Corporation (EDMC) to ensure that the students get multiple and diverse project opportunities and develop a nuanced understanding of role as responsive urban planners.

IGDTUW has recently signed an MoU with SDMC, NDMC and EDMC in the office of Hon'ble Lieutenant Governor of Delhi. As per MoU, the students of M.Plan. Course of IGDTUW are assisting SDMC on ongoing/pipeline projects of SDMC of diverse nature including area planning, capacity building of stakeholders, GIS mapping and analysis, media outreach, heritage management planning etc. The students have successfully been involved in one such project being undertaken by SDMC, the Parking Management Area Plan (PMAP) at Malviya Nagar, Delhi. During the course of this project, the students got several opportunities to interact with the SDMC officials through the meetings held in the office of SDMC as well as in the IGDTUW campus. Senior SDMC officials also visited the classroom of M.Plan. to guide the students for the project. A vigorous process including various secondary studies and frequent site visits and surveys for analysis of ground level situation was undertaken. The students have been widely using GIS technology for mapping and analysis of various activities.

The efforts and work produced by the IGDTUW students is highly appreciated and acknowledged by the SDMC officials. Following the success of PMAP, the University is now actively working to collaborate with North Delhi Municipal Corporation and New Delhi Municipal Council as knowledge partners, with a vision of synergistic partnership of academia and civic bodies for city development.



Name : **Ar. Vishal Rai**
Designation : Associate Professor & Head of Department
Qualification: M.Plan - SPA, Delhi
B.Arch - MNIT, Jaipur
Areas of Specialization: Sustainable Urban Development, Transport and Land Use Planning



Name : **Dr. Preeti Vajpeyi**
Designation : Associate Professor
Qualification: Ph.D - SPA, Delhi
M.Plan - SPA, Delhi
B.Arch - MAINT, Bhopal
Areas of Specialization Built environment as Pedagogical Resource, Sustainable Architecture, Responsive Architecture



Name : **Ar. Preeti Chauhan**
Designation : Associate Professor
Qualification: Ph.D (Pursuing) – Jamia Millia Islamia Univ.
M.Sc (Planning) – South Bank Univ., London
M.Plan (Town Planning) – ITPI, New Delhi
B.Arch – GCA Lucknow
Areas of Specialization: Healthcare Planning and Design, Evidence Based Design Techniques, Therapeutic Environmental Design in Hospitals, Product and Furniture Design, Sustainable Architecture, Town Planning, Interpersonal & Presentation skills.



Name : **Ar. Sneha Maji**
Designation : Assistant Professor
Qualification: M.Des in Industrial Design – IIT Delhi
B.Arch – SPA Delhi
Areas of Specialization: Industrial Design, Product Design, Human Computer Interaction (HCI), Graphics and New Media Design, Architecture Design Thinking, Architecture Adaptive Re-use UX/UI Design, Responsive Architecture



Name : **Ar. Venus Kashap**
Designation : Assistant Professor
Qualification: M.Arch – IIT Roorkee
B.Arch – College of Architecture, Chandigarh
Areas of Specialization: Energy efficient Building Design, Sustainable Urban Development, Biophilic design, Responsive Architecture



Name : **Ar. Jahnabi Kalita**
Designation : Assistant Professor
Qualification: Master of Landscape Architecture – CEPT Univ.,
Ahmedabad,
B.Arch. – RTM Nagpur University
Areas of Specialization: Landscape Architecture



Name : **Ar. Kshitij Kumar Sinha**
Designation : Assistant Professor
Qualification: PG in Advanced Construction Management
(ACM) from National Institute of Construction
Management & Research (NICMAR), Pune,
B.Arch – MITS Gwalior

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Courses Offered

B.Tech (CSE) – 4 Years
M.Tech-CSE (AI) -2 Years
Ph.D.

The Department of Computer Science and Engineering was established in 1998. The Department offers B.Tech. in Computer Science and Engineering and M.Tech. CSE (Artificial Intelligence). The Department also started Ph.D. course in 2014. The CSE Department has a talent pool of outstanding Faculty members, who, besides teaching, have been actively involved in various research and professional activities like, member of editorial boards of leading journals, running industry sponsored projects and transferring the technology developed in the lab to the industry. There have been numerous publications by Faculty members in International/National Journals/Conferences covering latest areas of research. Faculty keeps on participating as Keynote Speaker /experts on various professional platforms.

Department works on the vision and mission of creating skilled manpower in all emerging areas of computer science especially in the area of Artificial Intelligence. It has started a new course M.Tech. CSE (Artificial Intelligence), designed on CBCS Pattern. The B.Tech. Course is also completely revised as per CBCS scheme and now gives much flexibility to students to study the subjects of their choice.

The Department has completed sponsored research projects from NOKIA and Information Technology Research Academy (ITRA), Ministry of Human Resource and Development (MHRD) in collaboration with IIT-Delhi and IIIT-Delhi and presently having sponsored research projects from Microsoft, Intel and MHRD-DIS. The Department also received several equipment grants from ARM, Atmel, Microsoft, Intel, Texas Instruments etc. The Department has developed a practical teaching and learning environment that provides comprehensive set of tutorials, projects and experiments, catering to the needs of students and society by making use of modern computing platforms and making it available to the students. The Faculty members & Students of the Department are actively engaged in collaborative research projects funded by MNCs. The Department has two main Research Groups namely, AI group and IOT group, to conduct research work and projects in collaboration with Industry and Premier Institutes and to provide practical knowledge to students.



Lab Infrastructure

The Department has well equipped labs for practical and research work in the following domains:

1. Advanced Database and Mobile Database Systems
2. Software and Advanced Software Engineering
3. Advanced Computer Networking
4. Programming Labs on various platforms
5. Embedded System and Design
6. Computer Graphics and Multimedia
7. Network Security and Management
8. Mobile Architecture Programming
9. Artificial Intelligence

Technology Transferred

My Smart Phone Kit

Sponsored by Microsoft Mobile University Relations (Nokia University Relations) and in Association with MHRD (DIC & ITRA)] is designed to be used for M.Tech., B.Tech., MCA, BCA, Diploma courses of CSE/IT/ECE/EEE as a practical experimental setup for various courses. Patented Technology is transferred currently to one manufacturer named M/s. Trinity Microsystems Pvt. Ltd. Delhi.

ETI Lab Start-up

One Ph. D Scholar of the Department and senior Faculty Prof. S. R. N. Reddy has started a start-up sponsored by IGDTUW-*Anveshan* Foundation to encourage the entrepreneurship, leadership and management skills in youth.

On-going Projects

1. **Design & Innovation Center**
Principal Investigator: Prof. P.V.M. Rao (IIT Delhi)
Co-Principal Investigator: Prof. S.R.N. Reddy
Grant Agency: MHRD
Year of Sanction: 2014-20.
Duration: 6 years and Total sanctioned amount: Rs 26 Lakh
2. **Intel IoT Center for excellence**
Principal Investigator: Prof. S.R.N. Reddy
Grant Agency: Intel (India)

Year of Sanction: 2014-17

Duration: 3 years and Total sanctioned amount: Rs 2.25 Lakhs

3. **Intel Real Sense**

Principal Investigator: Prof. S.R.N. Reddy

Grant Agency: Intel (India)

Year of Sanction: 2015

Duration: 2 years and Total sanctioned amount : Rs 4 Lakhs

4. **Mobile Education Kit-3**

Principal Investigator: Prof. S.R.N. Reddy

Grant Agency: Microsoft University Relation, Finland

Year of Sanction: 2015-20

Duration: 5 years and Total sanctioned: Amount: Rs 23.40 Lakhs

5. **Detection of life threatening diseases by examining the human genome in Microarray data using distributed implementation of algorithms.**

Principal Investigator: Prof. Devendra K. Tayal

Grant Agency: Department of Science & Technology

Year of Sanction: 2019

Duration: 3 years and Total sanctioned amount: Rs 39.50 Lakhs

6. **E-Vidhya**

Principal Investigator: Prof. S.R.N. Reddy

Funding Agency: PPyrus, Little More Innovations and Intel

Project Grant: 31 Microsoft Go 2 in 1 devices worth approx. 15 lac

Year of Sanction: 2020

Duration: 1 Year [May be extended for 6 months]

Deployment: M.Tech [AI – 3rd Semester], Computer Science and Engineering, IGDTUW



School students taking test on tablets under E-Vidhya project

M.Tech. CSE (Artificial Intelligence)

The Department of Computer Science & Engineering started the M.Tech. in Computer Science & Engineering (Artificial Intelligence) in 2019 with the objective to create more skilled

manpower in the area of Artificial Intelligence. This course is designed as per the Choice Based Credit System(CBCS)scheme that gives much flexibility to students to study the subjects of their choice. The course includes core courses in soft Computing, Machine Learning, Neural Networks, Deep Learning etc and elective courses on various trending areas like IoT, Speech processing, Knowledge Engineering etc. The curriculum also includes Generic Open Electives where the students can do various MOOC courses and projects of their interest. The Department has an Artificial Intelligence Lab supported by the CURIE Grant of Centre of Excellence in AI from Department of Science and Technology.

Ph.D. in Computer Science & Engineering

The Department of Computer Science & Engineering started Ph.D. course in 2014 on various emerging research areas of Computer Science. The Department has a talent pool of outstanding Faculty members doing research in various areas of specialization. The Department has two main Research Groups namely, AI group and IoT group, to conduct research work and projects in collaboration with Industry and Premier Institutes. The core areas of research are,

1. Artificial Intelligence
2. Natural Language Processing
3. Data Mining
4. Biometrics
5. Health Informatics
6. Embedded Systems
7. Internet of Things
8. Mobile Architecture
9. Wireless Sensor Networks
10. Sentiment Analysis
11. Machine Learning
12. Image Processing

Research Areas in Department of Computer Science and Engineering (CSE):

1. Application of AI techniques in Internet of things network
2. Medical data Analysis using Soft computing Techniques
3. Early detection of congenital heart diseases in rural areas using machine learning & deep learning
4. A model for cardiovascular disease prediction using machine learning techniques
5. Object classification and detection using deep learning
6. Machine learning techniques for blood-based biomarkers identification for breast cancer
7. Periocular region based biometric authentication system under non-ideal conditions
8. Enhancing recommendation systems using Heterogeneous Information Network
9. IoT and AI Applications
10. Subject independent emotion recognition from EEG signals
11. Design and Development of Application layer protocol for resource constraint IoT applications
12. Wireless Sensor Network
13. Bio Medical Image Mining for Clinical Diagnosis using Machine Learning Techniques

- 
14. Query expansion in NLP
 15. Deep Learning Techniques for safer Image Steganography
 16. Data Fusion in IoT using Soft Computing Techniques



Name : **Prof. Seeja K.R.**
Designation : Professor and Head of Department
Qualification: Ph.D (CS) Jamia Hamdard,
M.E(CSE) Madurai Kamaraj University,
B.E (CSE)
Area of Interest: Data Mining, Algorithm Design, Intelligent Computing,
Bioinformatics, Biometrics.



Name : **Prof. Devendra Kumar Tayal**
Designation : Professor and Chief Proctor
Qualification: Ph.D(CSE) JNU,
M.Tech(CSE) JNU
Area of Interest: Fuzzy Logic, Artificial Intelligence, Data Mining,
Sentiment Analysis and Opinion Mining, Intelligent
System, DBMS, Graph Theory, Data Analysis,
Information Security using Soft Computing



Name : **Prof. Ela Kumar**
Designation : Professor and Dean (Student's Welfare)
Qualification: Ph.D - Delhi University, M.Tech –IIT Roorkee, B.E – IIT
Roorkee.
Area of Interest: Artificial Intelligence, Natural Language Processing,
Web Technologies, Semantic Web.



Name : **Prof. S.R.N. Reddy**
Designation : Professor
Qualification: Ph.D (C&T) – JNU,
M.Tech (CS&T) – JNU
Area of Interest: Embedded Systems, IoT, Mobile Architecture and Smart
Product Design and Sensor Networks



Name : **Dr. Vivekanand Jha**
Designation : Assistant Professor
Qualification: Ph.D - IGDTUW
M.Tech (CSE), IIT Gwalior
B.Tech, Rohilakhand University
Area of Interest: Wireless Networks, Algorithm Design, Cloud Computing



Name : **Dr. Ravinder M.**
Designation : Assistant Professor
Qualification: Ph.D (CSE), JNTUK
M.Tech (CS) –SIT JNTUK
B.Tech – BVRIT, JNTUK
Area of Interest: Image Processing, Image Retrieval, Video Retrieval, Machine
Learning



Name : **Ms. Vibha**
Designation : Assistant Professor
Qualification: Ph.D (Pursuing)
M.Sc.(CSE)
M.Tech (CSE), MNNIT Allahabad
Area of Interest: DBMS,, Multimedia Systems, Object Oriented Programming,
Mobile Operating System



Name : **Ms. Monika Choudhary**
Designation : Assistant Professor
Qualification: Ph.D (Pursuing)
M.Tech (CS), IIT Roorkee
B.E (CS), University of Rajasthan
Area of Interest: Cloud Computing, Distributing Computing, Operating System,
Algorithms



Name : **Ms. Najme Zehra**
Designation : Assistant Professor
Qualification: Ph.D (Pursuing)
M.Tech (IT), GGSIPU
B.Tech (ECE), Rohilakhand University
Area of Interest: Embedded Systems, Computer Architecture, Operating
Systems



Name : **Dr. Khyati Ahlawat**
Designation : Assistant Professor
Qualification: Ph.D, USICT GGSIPU
B.Tech (CSE), GGSIPU
M.Tech(CSE), Banasthali University
Area of Interest: Big Data Analytics, Machine Learning,Data Mining



Name : **Dr. Arunima Jaiswal**
Designation : Assistant Professor
Qualification: Ph.D (CSE), DTU
M.Tech (CSE), DTU
B.Tech(IT), GGSIPU
Area of Interest: Web Technologies, Sentiment Analysis, Soft Computing,
Machine Learning



Name : **Mr. B. Indra Thannaya**
Designation : Assistant Professor
Qualification: M.Tech (CSE)-JNTU, Hyderabad,
B.Tech (CSE) – Andhra University
Area of Interest: Software Architecture, Software-Re-engineering

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCES

Courses Offered

B.Tech (CSE -AI) – 4 Years

Artificial Intelligence is transforming business, industry, government, social interaction and research. The growth of artificial intelligence and data science as disciplines has been rapid in the last decade. It is becoming clear that a wide gamut of traditional scientific research stands to benefit from advances in these areas. The newly established Department of Artificial Intelligence and Data Science (AI&DS) in the university aims to focus on a four-tiered strategy of Education, Research, Development and Innovation (ERDI Strategy) in the field of AI, Machine Learning, Deep Learning and Data Sciences.

To leverage the department with latest tools and Technologies with high computation, University has established a Centre of Excellence – Artificial Intelligence with a grant of Rs. 8 Cr. From Department of Science and Technology, Government of India. A state of the art infrastructure is being created in the Department for facilitating academics, research and development activities in the domains of AI and Data Sciences.

Currently department is running 4 years under graduate program B.Tech – CSE(AI), Which is specially designed to enable students to build intelligent machines, software, or applications with a cutting-edge combination of machine learning, analytics and visualization technologies. This course aims at providing not only the core computing subjects such as Data Structure, DBMS, Networking, Algorithms etc but also gives intensive inputs in areas of artificial intelligence, machine learning, deep learning and big data analytics along with strong application domains such as NLP, Computer Vision, Robotics and others.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

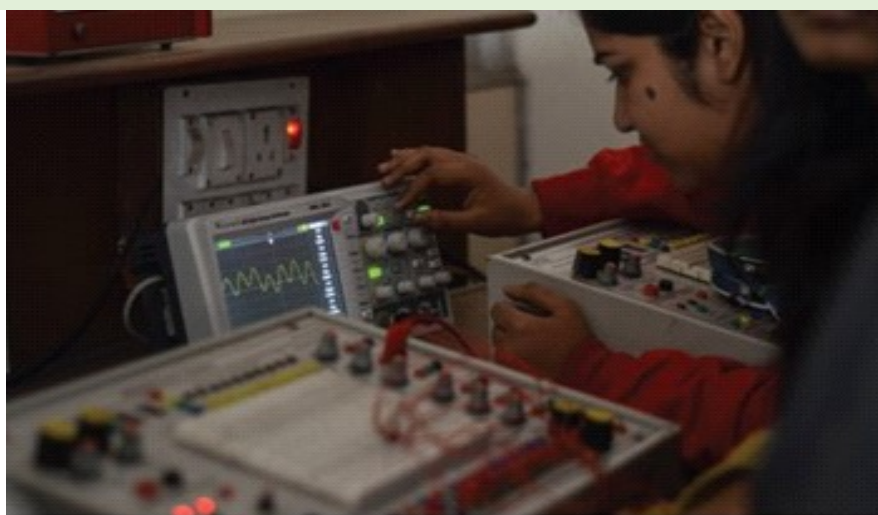
Courses Offered

B. Tech (ECE) - 4 Years
M.Tech. (ECE)VLSI - 2 Years
Ph.D. (ECE)
Ph.D. (Electrical Engineering)

The Department of Electronics & Communication Engineering was established in the year 1998. Since its inception, it has been dedicated to provide dynamic and quality women engineers to the industry and society. In the existing scenario of rapid and sophisticated development in the field of Electronics and Communication and its allied fields, the Department's intent and focus has always been to produce globally competitive and socially sensitized engineering graduates and to bring out quality research in the emerging areas of Electronics and Communication Engineering. The Department is committed to provide quality and contemporary education in the domain of Electronics and Communication Engineering through latest curriculum, state-of-the-art laboratory facilities, collaborative ventures with industries and effective teaching-learning practices. Considering the latest trends in industry and research, the Department has recently revised the Under Graduate curriculum to enhance the employability of students.

The Department has always been on a high growth path and has an experienced and dedicated Faculty with a strong commitment to engineering education.

The Department offers a strong research orientation to students in the areas of Communication Systems, Signal & Image Processing, Embedded systems, Microelectronics and VLSI Design. The Faculty members, who besides teaching, are active in conducting research as evident from their list of publications in International/ National conference proceedings/Journals.



Lab Infrastructure

The Department has the following state-of-the-art laboratory facilities managed by Faculty coordinators and staff-in-charge:

- VLSI Design
- Digital Signal Processing
- Embedded System Design
- Communication System
- Analog Electronics
- Microwave and Radar Engineering
- Microprocessors & Microcontroller
- Digital Circuit & Systems
- Electrical Science & Control Engineering
- Mobile Communication
- Optical Communication
- Computer Vision and Image Processing

The labs are equipped with Desktops and GPUs with latest operating systems. In addition to Licensed software - Cadence, Synopsys, Mentor Graphics, students and Faculty also work on Xilinx, Modelsim, Orcad software, FPGA kits, Microwind, and MATLAB, to name a few.

On-going Projects

SMDP

IGDTUW has received grants under the Special Manpower Development Course for Chips to System Design (SMDP-C2SD)–initiated by the Department of Electronics and IT, Govt. of India, as one of the Participating Institution (Category III). It emphasizes on design and fabrication of ASICs/ICs/digital integrated circuits to develop working Prototypes of Systems/sub-systems/Systems on Chip for societal applications. Tools received under this are Synopsys, Cadence, Mentor Graphics, Xilinx, FPGA boards.

VIGYAN JYOTI - KNOWLEDGE PARTNERS

IGDTUW has got the opportunity to be Knowledge Partner for JNV, Jaffarpur Kala. The selection of students and the inauguration of Vigyan Jyoti Project was held on 4th March, 2020 at Jawahar Navodaya Vidyalaya, Jaffarpur Kalan, Delhi. It was attended by the Nodal Officer for VJ at IGDTUW, Dr Jasdeep Kaur Dhanoa along with Dr. Nidhi Goel (As Role Model/Programme Officer of 2018-19 VJ at IGDTUW).

M.Tech. (VLSI DESIGN)

M.Tech. (VLSI Design) is a 2- year postgraduate course, which fundamentally covers the engineering aspects involved in designing and developing IC-based systems, and is divided into four semesters of six months each. This M.Tech. course covers the fundamentals and engineering aspect of designing and developing IC based systems. Traditionally VLSI technology has emerged out as a successful conglomeration of two streams: Material Science and Electrical Engineering. The state of the art VLSI technology requires research in physical devices as well as novel design and development of electrical circuit. This course focuses on designing of semiconductor devices and circuits. Students are encouraged to do an internship to gain industry experience. The general objective of this course is to make the student understand the basic building blocks of VLSI Design and different simulation techniques. The teaching scheme of M.Tech course is designed with the aim of conducting research in various aspects of the ever growing field of Very Large Scale Integration (VLSI) and establishing links between industrial companies. M.Tech. course is specially designed catering to the needs of the industry as well as the research community both in the core subjects and through Electives.

M.Tech. (VLSI Design) course provides research facilities in the area of device modelling, simulation and various aspects of advanced VLSI design. ECE Department has VLSI Design Lab equipped with some of the latest and most advance EDA tools, FPGA boards and circuit solvers for analysing 2D/3D integrated circuits and systems. The lab also has a very rich wealth of state-of-art systems and tools for design and testing which includes Hardware Facilities, EDA tools, Software and Library. Students are exposed to various design software in this course and are trained in several topics that cut across domain, starting from lowermost level of physical devices to the top level of application development. The course covers all the essential elements of the VLSI design concepts which can further help students to use these conceptual skills in the course of his/her own experimental projects in various fields and advanced subjects pertaining to VLSI field.

Ph.D. Course

Research Areas in Department of Electronics & Communication Engineering (ECE) are as follows:

The Department offers Ph.D.(ECE) and Ph.D. (Electrical Engineering).Research in Department of ECE covers an extremely broad range of topics. Whether in VLSI Design, energy and power systems, nanotechnology devices or communication, the research conducted in ECE is at the cutting edge of technological and state-of-the-art developments. Broadly the research areas have been categorized into four strategic sub-categories as given below:

1. VLSI Design and Nanotechnology:

- Low power high speed CMOS amplifiers
- Filter design using substrate Integrated Circuits
- Low Power Digital Circuits with Enhanced Performance at nano scale using advanced implementation techniques for improved performance
- Design of high speed CMOS amplifiers using adaptive biasing
- Performance improvement in Read out Integrated Circuits (ROIC)

2. Signal and Image Processing:

- Abnormality detection through medical image processing.
- Bio-metric recognition system based on fusion techniques.
- Biomedical imaging.
- Applications of Infrared Thermal imaging.
- Designing of Multi-Dimensional Digital filter using optimization Techniques.

3. Power Systems and Electrical & Control Engineering:

- Interconnection issues of all types of renewable energy sources and its protection. Up-gradation and transformation of conventional grid into smart grid.

4. Communication Systems:

- Performance analysis of mixed RF/FSO communication system utilizing spatial diversity and beam forming.
- Decoding and performance evaluation of differential operative FSO networks with pointing errors.
- Energy efficiency optimization and performance analysis through cluster based routing protocols in WSN.
- Energy efficient cognitive radio networks.



Name :
Designation :
Qualification:
Areas of Specialization:

Prof. Nidhi Goel
Professor & Head of Department
Ph.D – IIT Roorkee,
M.Tech (Digital Communication)
B.E. (Electronics & Communication)
Digital System Design, ASIC, Embedded Systems,
Multimedia Security Computer Vision, Soft
Computing Techniques



Name :
Designation :
Qualification:
Areas of Specialization:

Prof. Ashwni Kumar
Professor, Pro-VC and Dean (International Affairs)
Ph.D(ECE) – Delhi University
M.E (ECE) - Delhi College of Engineering
MBA (FMS) – Delhi University
B.E. (ECE) – Delhi College of Engineering
Optical Communication, Digital Signal Processing,
Strategic Management



Name :
Designation :
Qualification:
Areas of Specialization:

Prof. Jasdeep Kaur Dhanoa
Professor and Dean (Academic Affairs)
Ph.D (Low Voltage Analog Design) – GGSIPU
M.E. (ECE) – Delhi College of Engineering
B.E (Electronics) – Delhi University
Low Voltage Analog Designs, VLSI, CMOS & Mixed
Signal Design, Analog Signal Processing, Digital
Electronics



Name :
Designation :
Qualification:
Areas of Specialization:

Prof. Vandana Niranjana
Professor
Ph.D(Low Voltage VLSI Design)- USET, GGSIPU
M.Tech (ECE -VLSI Design) – IIT Roorkee
B.E (ECE) – GEC Bhopal
VLSI Circuits, Analog IC Design, Low Voltage CMOS
Circuit Microelectronics



Name :
Designation :
Qualification:
Areas of Specialization:

Dr. Akash Tayal
Associate Professor
Ph.D – IIT Delhi
M.Tech – NSIT
B.Tech – Jamia Millia Islamia
Statistical Signal Processing, Game Theory, DSP,
Decision Science & System Dynamics, Machine
Learning, Medical Image Processing, Optimization



Name :
Designation :
Qualification:
Areas of Specialization:

Dr. Maria Jamal
Assistant Professor
Ph.D – Jamia Millia Islamia
M.E – Delhi College of Engineering
B.Sc. (Engineering) – Jamia Millia Islamia
Control System, Circuit and Systems, Electrical Science

	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Dr. Shobha Sharma Assistant Professor Ph.D – GGSIPU M.E. – BITS Pillani VLSI Design, Digital Circuits and Systems Advanced Computer Architecture</p>
	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Dr. Pankaj Gupta Assistant Professor Ph.D(Electrical Engineering) M.E (Control & Instrumentation) B.E. (Electrical Engineering) Power Systems, Power Electronics, Control and Instrumentation, Renewable Energy Sources, Islanding Detection Techniques and Electrical Machines</p>
	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Dr. Richa Yadav Assistant Professor Ph.D (ECE) – Delhi University M.E (ECE) – MDU, B.E (ECE) – MDU Digital Signal Processing, Designing of Fractional Order Differentiators and Integrators, Optimization of Operators, Evolutionary Algorithms</p>
	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Mr. Kanchan Sharma Assistant Professor Ph.D (Pursuing) – Delhi University M.Tech (ECE) – Allahabad University B.Tech (ECE) – Allahabad University Wireless Communication, Optical Communication, Signal Processing</p>
	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Ms. Greeshma Arya Assistant Professor Ph.D (Wireless Communication) – Pursuing UPTU M.Tech, B.Tech Optical Communication, Wireless Sensor Networks</p>
	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Mr. Mohd. Ejaz Aslam Lodhi Assistant Professor Ph.D (Pursuing) – Jamia Millia Islamia University M.Tech – IIT Kanpur, B.Tech – Jadavpur University Communication, Wireless Communication, Microwave Engineering, Photonics Network and Switching Digital Design, Cognitive Radio</p>
	<p>Name : Designation : Qualification: Areas of Specialization:</p>	<p>Ms. Neha Singh Assistant Professor M.Tech (Lasers & Photonics) – IIT Kanpur B.Tech (ECE) – MMMUT Gorakhpur Laser Technology, Optics and Photonics Science & Engineering, Biophotonics, Electronics & Communication Engineering.</p>

DEPARTMENT OF INFORMATION TECHNOLOGY

Courses Offered

B. Tech (IT) - 4 Years

M.Tech.-IT (Information Security Management) - 2 Years

Master of Computer

Applications(MCA) – 2 Years

Ph.D. - (IT)

Ph.D. Computer Application

The Department of Information Technology, founded in January 2010 is the fastest growing Department. The Department has shown incomparable innovation, research aptitude, intellectual talent, technical skills, and problem-solving skills through active participation of Faculty, research scholars and students at national and international level. Since its inception, the Department started a four-year B.Tech.(IT) course in 2010 and a three-year post graduate course in Computer Applications (MCA) in 2011 to nurture talent in the field of information technology through IT solution development. With information technology at the peak, there also comes a need of securing the IT environment, hence the Department launched a Postgraduate course in Information Security Management M.Tech.-ISM in 2013 (now renamed as MTech.- IT (ISM)) to provide knowledge base and work force with requisite expertise to cater to the needs of industry and information technology in enhancing the security dimension of IT and cyber world.

To exemplify R&D activities, the Department started the Ph.D. course in 2014 and currently 16 research scholars are pursuing the research work in the Department. The Department believes in continuous learning and therefore, hosts various Workshops, Faculty Development Course, Conference, Seminars and expert talk sessions on regular basis. The Department encourages its students to participate in various conferences, workshops and other competitions to hone their technical expertise. Technical events like Espectro, Advaya have been successfully conducted by the Department under the aegis of ACM Society since 2011.



Lab Infrastructure

The Department boasts of a state-of-the-art, centrally air-conditioned Computer Centre with newly procured high-end configuration computing systems. In addition, there are Software Design Lab, Distributed Computing Lab and Information Security Lab to address the growing computing needs of the students at the Department. The labs are equipped with latest configuration computer systems to meet the computing needs of the students. Recently, the Department established a software development cell to cater the requirements of automation of various divisions of the University. The Department houses a library of its own to provide focused and concentrated access to the learning material in the field of Information Technology to its students, Faculty members and staff.

MoU with NASSCOM Foundation for thingQbator Lab

Signed a Memorandum of Understanding (MoU) with NASSCOM Foundation on 11th May, 2018 for starting "thingQbator" course of CISCO at IGDTUW. thingQbator is a CISCO funded course for the skill development of young people in India under its CSR Mandate. Under this course, a lab with latest IoT equipment including 3D printer, IoT Gateways, IoT Platforms, Development Boards, and various other kits has been established by NASSCOM Foundation at the University. The course aims to provide a platform where University students could work together with like-minded colleagues, get exposure to the latest Internet of Things (IoT) technology - and turn their ideas into working prototypes in an environment that encourages a hands-on culture. The course is implemented by NASSCOM Foundation through its partners.

MoU with Cyber Peace Foundation

Signed an MoU with Cyber Peace Foundation (CPF) on 17th January, 2019 to promote research and development activities in the area of cyber security and forensics. A Centre of Excellence on Cyber Security and Forensics will be established in the Department, where students and Faculty members will be involved in quality research work along with exposure on real life case studies.

MoU with IBM (I) Pvt. Ltd

Signed an MoU with IBM (I) Private Ltd. for technical upgradation of the students and the Faculty members on latest technologies. Experts from IBM will mentor the students for their projects, internships and will conduct Workshops, Seminars and FDP time to time.

MoU with Forensic Science Lab, Delhi

Signed an MOU with FSL, Delhi on 18th Feb 2021 to facilitate drawing up specific projects as per the requirement of FSL and providing internship opportunities to the UG/PG student of IGDTUW.

On-going Projects

ISEA

Department of IT is awarded with a project grant of Rs. 65.3 lakhs from Department of Electronics and Information Technology, Ministry of Communication and Information Technology under ISEA project Phase-II and the following labs have been established under the project grant of Rs 65.3 lacs:-

Cyber Forensics Lab: The lab is equipped with FRED Server and Net Force Suite –a forensic suite developed by C-DAC.

IoT Lab: The lab has been equipped with real time test bed "SenseNuts: IoT Platform for Excellence" for experimenting sensor for IoT applications.

The Objective of the ISEA Project includes capacity building in the area of information security to address the human resource requirement of the country, training of government personnel and creation of mass information security awareness targeted towards academic users, general users and government users. The Department has already provided the security awareness education to approx. 500 students in the last two academic years.

Chief Investigator: Prof. R.K Singh, Co. Chief Investigator: Dr. A.K Mohapatra

M.Tech.-IT with specialization in Information Security Management

The M.Tech.-Information Technology(IT)course with specialization in Information Security Management(ISM) is offered to women engineering graduates who are interested in pursuing their career in industry, academia or research in the area of Information Security. This is a two years full time regular course with total 87 credits including core courses, Departmental elective courses and generic open elective courses spread over in four semesters.

The course is flexible enough to allow a student to specialize in any topic of interest by taking elective courses (Departmental Elective and General Open Elective) and working on a research project in that area. The advanced core courses like Advanced Programming, Data Structure and Algorithm Analysis, Advanced Machine Learning provides deeper insights into various aspects of Information Security Management including Cryptography, Cyber Security, Blockchain, Security Testing, Security Patterns and others.

The M.Tech.-IT (ISM) course provides ample opportunities for the students to explore both research and development skills. Also, the dissertation in 4th semester allows the students to go deeper into a topic of interest by joining exciting research projects under the supervision of Faculty members in the Department. The emphasis is on conducting original research and writing a dissertation (individually) that reports these results. The Faculty members in IT Department are active in research areas including information security, cryptography, wireless networks, online social media, machine learning, deep learning, software engineering and others. Placements of our M.Tech. students have been excellent so far and witnessed several jobs offers from the top companies such as NetApp, ORANGE, CISCO, ORACLE, PWC, American Express, etc. Also, M.Tech. students are performing extraordinarily well for internships at various top companies such as ALTRAN, CISCO, NetApp, etc. **Recently one**

student of M.tech (ISM) has won a cash prize of Rs. 7.25 lac under FS-ISAC building cyber security diversity scholarship and became the first women in India to receive the same. Around 50 students have qualified the EC-Council's CEH Exam and are the Certified Ethical Hacker (CEH). The CEH exam is designed to test the cyber security professional's baseline knowledge of security threats, risks, and countermeasures through lectures and hands-on labs.

MCA

Department of Information Technology introduced MCA course from the academic session 2011-2012 with an annual intake of 60 students. The MCA course is two year professional Post-Graduate course, designed to help an individual to meet the growing demand for qualified professionals in the field of software development. The course is a blend of both theoretical and practical knowledge. Course curriculum consists of core courses of fundamental computer science with a flexibility to choose subjects from a basket of specialized courses. Also, courses from Management, Mathematics and Generic Open category provide the opportunity to the students to learn various interdisciplinary courses. At the end of every year (during the summer break), students are required to complete an Internship in the industry where they get an opportunity to learn industry trends and technologies.

The Information Technology Department has well equipped classrooms with LCD projector, smart podium, sound system and others. Computer labs are having latest operating system and processors with software like MATLAB, Java, MySQL, LINUX and others for practical and research work. Department is having a strong industry connect in the form of MoUs (with IBM, CISCO thingQbator, Cyber peace Foundation) which helps students to be industry ready. The students of MCA are actively involved in developing software applications for the University and other government organizations

The students of MCA get ample opportunity to get placement in the top IT companies including CISCO, IBM, Microsoft, ION Trading, NetApp, ARM and several others. So many students complete their final semester projects in top companies.

Ph.D.Course

The Department of Information Technology is offering Ph.D. in IT and Ph.D. in Computer Applications. The Ph.D. Course at Department of Information Technology, is unique in the sense that it caters to fresh post-graduates and working women, alike. It has diverse backgrounds of scholars, including women with vast industry experience who have moved to academia or intend to do so, women with industry/academic experience or post graduate degrees who aim to resume research after a hiatus owing to relocation or family planning. There is no dearth of opportunities and prospective supervisors more than welcome all worthy candidates who have research ability instilled in them. The choice of supervisor and scholar, is two-way/mutual and based on matching of expertise and interest area, of the supervisor and scholar, respectively.

A Ph.D. scholar has to undergo coursework pertinent to her proposed area of research, following which she has to present a substantial research plan aptly assessed by the Department Research Committee. Matters of admissions, research Grant/travel grants, etc. are supervised by the Ph.D. coordinator and Deputy Dean Research and Consultancy at the University level. While supervisor allocation, choice of coursework, completion of minimum credits thereof, semester-wise progress reports' evaluation, etc. fall under the purview of Department Research Committee constituted with experienced domain experts from reputed institutes such as NIT, JNU, DTU, etc. Full time students may be sponsored by UGC if they are NET-JRF qualified, apart from that institute fellowship, namely, IGDTUW-JRF is available. Junior Research Fellowships (JRFs) ask for few hours' worth of work-assignments per week, it may be perceived as an added benefit of honing teaching and soft skills of the scholar through laboratory or Departmental integral activity allocations.

Ph.D. scholars mentor M.Tech., MCA, and B.Tech. student's projects, usually owing to lab interactions and/or common supervision by a faculty member. This facilitates cross-course thinking, for instance, Ph.D. student formulating the problem after systematic literature review, B.Tech. students writing code for the proposed algorithm, MCA student developing GUI/mobile app for the novel solution, while M.Tech students preparing manuscript for possible publication of this heterogeneous team's work. Pre-Ph.D. seminar at near completion stage of a Ph.D. student's journey of thesis writing, is open for attendance, to all, hence fostering culture of transparency and healthy exchange of knowledge and constructive feedback in the Department. Perennial series of workshops on digital forensics, cyber security, artificial intelligence and deep learning re-conducted, where scholars are not merely participants, rather session-takers to showcase hands-on coding skills and recapitulating concepts learned through teaching. They truly reinstate learning by doing. Besides that, workshops on research methodology, LaTeX and other literature and reference management tools are an integral part of the first few days of a Ph.D. student's journey. Our scholars being well versed in them right at the beginning seem to justify – "Well begun is half done"-Anon.

The serene campus atmosphere alongside high configuration PCs and a quiet dedicated research scholars' lab acts as the ideal workstation of a Ph.D. scholar. Moreover, access to coveted journals from Publishers such as: IEEE, ACM, Springer adds to the rich resource tank of a research scholar, wanting her to voluntarily stay on campus from early morning to late evenings. The Department encourages project write-ups with scholar getting a chance to be principal investigator, provides support for publication in for international conferences outside India particularly through Faculty grants, and so on.

Presently, scholars are working on big data analytics, soft computing techniques, evolutionary computing, optimization, wireless sensor networks, information security, malware analysis through machine learning, healthcare analytics, recommender systems, optical networks, clone detection, cloud computing, software systems, and many other multidisciplinary areas, primarily with application of artificial intelligence techniques, which indeed is the new technology.

Our scholars have a myriad feather in their caps, multiple SCI-E journal papers per scholar, International conferences of ACM/IEEE, data scientist offers from R&D divisions of MNCs, Assistant Professorship at Government University in NCR, to name a few.

Research work in Information Technology is being pursued on the following problems:

- Classification of Hyperspectral Medical Images
- Quality metrics for Autonomic Systems
- Passive optical networks
- Predictive policing using artificial intelligence
- Recommender systems
- Information and web security, Software Engineering
- Android malware analysis using machine learning
- Natural Language Processing for Healthcare analytics
- Online Social Networks
- Deep Learning and Network Science
- Computing for Social Good
- Blockchain, its security and efficiency especially related to consensus issues.
- Cryptanalysis techniques in symmetric key cryptography that can be applied to analyze new block cipher and hashing standards.
- Development and analysis of security of new mobile payment protocols for resource constrained low end devices.
- Use of cryptographic techniques in Digital forensics, e.g., use of fuzzy hashing to find similar malware files.
- Resource allocation in service oriented wireless sensor networks.
- Designing lightweight learning algorithms for predictive maintenance in Industry 4.0.
- Interoperability issues among various network translation technologies.
- Secure and anonymous mutual authentication and key agreement scheme for wireless sensor networks.
- Online social media analytics.



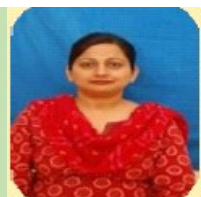
Name : **Prof. A.K. Mohapatra**
Designation : Professor & Head of Department
Qualification: Ph.D (IT) – GGSIPU
M.Tech (CS) – IIT (ISM) Dhanbad
Areas of Specialization: Cryptography, Cyber Security and Information Security



Name : **Prof. R.K. Singh**
Designation : Professor & Registrar
Qualification: Ph.D (IT) – GGSIPU
M.S – BITS Pilani
Areas of Specialization: Software Engineering Project Management, Software Testing, Cyber Security and Information Security



Name : **Prof. Arun Sharma**
Designation : Professor
Qualification: Ph.D – Thapar University
M.Tech (CSE) – Punjabi University
Areas of Specialization: Big Data Machine Learning, Software Engineering, Soft Computing Techniques



Name : **Dr. Kalpana Yadav**
Designation : Assistant Professor
Qualification: Ph.D (Software Reliability) – Jiwaji University, Gwalior
M.Tech (CSE) – GJU Hisar
Areas of Specialization: Soft Computing, Software reliability



Name : **Dr. Rishabh Kaushal**
Designation : Assistant Professor
Qualification: Ph.D (Computer Science) – IIIT Delhi
MS by Research (Computer Science) – IIIT Hyderabad
Areas of Specialization: Online Social Networks, Deep Learning, Network Science Computing for Social Good



Name : **Dr. Nisha Rathee**
Designation : Assistant Professor
Qualification: Ph.D – MDU Rohtak
M.Tech(CSE) – MDU Rohtak
Areas of Specialization: Software Testing, Data Mining, Data Structures



Name : **Dr. Niyati Baliyan**
Designation : Assistant Professor
Qualification: Ph.D - IIT Roorkee
M.Tech – Gautam Buddha Univ., Greater Noida and Sheffield Hallam University, U.K
Areas of Specialization:



Name : **Dr. Mohona Ghosh**
Designation : Assistant Professor
Qualification: Ph.D & M.Tech – IIIT Delhi
Post Doc – NTU Singapore
Areas of Specialization: B.Tech – GGSIPU
Symmetric Key Cryptography and its associate cryptanalysis, Cyber Security, Cyber Forensics



Name : **Dr. Sourabh Bharti**
Designation : Assistant Professor
Qualification: Ph.D (Information Technology) – IIITM Gwalior
M.Tech (Computer Science and Engg.) – IIITM Gwalior
Areas of Specialization: Wireless Sensor Networks, Internet of Things, Intelligent Sensing



Name : **Ms. Ankita**
Designation : Assistant Professor
Qualification: Ph.D – Pursuing USCIT, GGSIPU
M.Tech (IT) – USCIT, GGSIPU
Areas of Specialization: Software Testing, Advanced Java Programming and Networking Security



Name : **Ms. Nidhi Arora**
Designation : Assistant Professor
Qualification: Ph.D – Pursuing IIT Delhi
M.Tech (CSE) – IIT Delhi
Areas of Specialization: Data Structures, Algorithms



Name : **Mr. Gaurav Indra**
Designation : Assistant Professor
Qualification: Ph.D – Pursuing NSIT
M.Tech (SE) – DTU
Areas of Specialization: Post Quantum Cryptography, Information Theory, Mutual Authentication in Cognitive Radio based IoT, Secure Wireless Communication, Big Data Analytics, Cognitive Computing



Name : **Dr. Bhawna Narwal**
Designation : Assistant Professor
Qualification: Ph.D - IGDTUW
M.Tech (ISM) – IGDTUW
Areas of Specialization: Cryptography, Information Security, Network Security, Wireless Networks



Name : **Ms. Charu Gupta**
Designation : Assistant Professor
Qualification: Ph.D – Pursuing IGDTUW
M.Tech (Information Security) –GGSIPU
Areas of Specialization: Cryptography, Information Security

Courses Offered

**Bachelor of Business
Administration - 3 Years
Master of Business
Administration - 2 Years**

University has started Department of Management under the Faculty of Business Studies in 2019. The Department has the vision to be recognized globally as the destination for future leaders and become a centre of excellence in management education by creating a knowledgeable society and promoting business and education. Also, we offer management education based on principles and ethical human values, directed towards the changing needs of the professionals, society, industry and Nation. We aim to provide the aspiring women of India a learning environment to meet the challenges of changing environment and encourage them for continuous innovation and learning. We equip the young minds with skill-based practical business management knowledge and analytical skills and develop entrepreneurial capabilities to facilitate them in emerging as Business Leaders.

The Department is currently running a BBA course since 2019 and a two-year full-time MBA course from the Academic Session 2020-21 in order to cater to the growing industry need for Management graduates along with technical background.

The courses aim at providing specialization in business and management principles for aspirants that have the motivation & desire to gain a broad understanding of societal context and become a leader in the world without boundaries. The Curriculum establishes a common foundation in the fundamental practices of business including finance, marketing, leadership, negotiation, operations, strategy, and more. In addition to acquiring specific analytical and quantitative skills, students become acclimated to Management Program standards of communication and collaboration, and develop strong, lasting relationships with one. The syllabus is meticulously designed as per the latest CBCS curriculum to gain insight into the perspective of management and to understand the larger context.



The BBA and MBA courses are divided into four distinct areas, namely:

- ***Departmental Core Courses (DCC)***
- ***Allied Management Course (AMC)***
- ***Departmental Elective Courses (DEC)***
- ***Generic Open Elective Courses (GEC)***

The curriculum promotes industrial visits to esteemed Organizations. Summer Project and Major Project with due weightage of credits are an integral part of the curriculum. We provide the option to earn Research Based Credits and offer the flexibility to incorporate online MOOC Courses. The pedagogy actively involves Case-Method learning with smaller hands-on team projects, personal reflection and research or entrepreneurial projects.

Structure of BBA and MBA Program

BBA (Bachelor of Business Administration)

Under-Graduate / Three years /6 Semesters

Total Number of Credits in B.B.A: 128 Credits

Four Major Buckets of Elective Courses Specialization are offered, namely:

- Finance,
- Marketing,
- Human Resource,
- Management of Global Business.

MBA (Masters of Business Administration)

Post Graduate / Two years /4 Semesters

Total Number of Credits in M.B.A: 124 Credits

Five Major Buckets of Elective Courses Specialization

- Finance
- Human Resource Management
- IT Management
- Knowledge Management
- Operations and Supply Chain Management

Internships

Summer internships have evolved into a critical criterion for determining a B-School's competitiveness. The wholesome educational experience imparted by any eminent B-School includes exposure to a variety of work cultures. IGDTUW has successfully added a feather to its cap by beginning a prestigious MBA course with a batch intake of 27 students in the academic session 2020-21. Summer Placements process, for the first batch of its flagship Post Graduate Programme in Management, registered successful internship offers from prominent industry recruiters such as

GE, TATA Power, BCG and RBI for the domains of HR, Finance, Marketing, IT and Operations.

MBA Summer Internships 2021



BBA Summer Internships 2020



BBA Summer Internships 2021



Faculty Members in the Department of Management



Prof. Shalini Arora (Head of the Dept.)

PhD (Mathematics), M.Sc. (Mathematics)

Awards: 'YOUNG SCIENTIST AWARD' awarded by

Dept. of Science and Technology, Govt. of India

Teaching experience: 20 years

Research Experience: 21 years

Research Area: Mathematical Programming, Allocation Problems and combinatorial optimization



Dr. Dhanjay Yadav

Assistant Professor (Management and Soft Skills), BBA Coordinator

PhD, MBA, B.Com (Hons.), UGC-NET (Management)

Teaching experience: 12 years, Industry Experience : 4 Years

Area of Research: Finance

Research Publications: 5 Research papers in National and International refereed Journals.

Faculty Coordinator: T& P Cell for Department of Management, IGDTUW

Visiting Faculty Members in the Department of Management



CS. Ankit Verma

M.Com, Company Secretary, UGC(NET)

Area of Specialization: Finance Accounting & law



Dr. Ansh Gupta

FPM(PHD), BE (Electrical) DTU

Area of Specialization: Marketing Management, Marketing Research, Consumer Behaviour, Digital, Green and Sustainable Marketing



Mr. Lakshay Batra

M.Sc. in Applied Mathematics, Pursuing PhD from DTU

Area of specialization- Applied Mathematics & Statistics



Ms. Nidhi Agarwal

PhD (Pursuing) from IGDTUW, M. Tech, B. Techn
Computer Sciences



Dr. Neha Saini

PhD (Management) UGC NET, MBA, M.Com
Area of Specialization: Finance and International
Business



Ms. Megha Jain

PhD (Management): Pursuing, FMS, DU
Area of Specialization: Finance



Dr. Meghna Goswami

PhD (Management),
UGC- NET (Management), MBA - HR, Executive
Certification - HR Analytics
Areas of Specialization: OB-HR, Business
Communication, HR Analytic



Dr. Mukta Girdhar

PhD (Earth Sciences), M.Tech
Areas of Specialization: Environment, GIS, RS, Drone
and Disaster Management



Mr. Rajeev Mahajan

ME (Industrial Engineering), B.E.(Mech)
Area of Specialization: Operational Research/Quantitative
Methods/Decision Sciences, Operational Management,
Process Improvement Techniques, Management of
Manufacturing System, Industrial Management, Project
Management



Mr. Salil Garg

Ph.D (pursuing), MBA(Finance), B. Com (Hons.)

Area of Specialization: Finance



Dr. Shalini Yadav

PhD (Management)

Area of Specialization: Marketing and Human
Resource Management



Dr. Shikha Gupta

PhD (Economics), UGC-NET, M.com, PGDIM, B. A. (H)
Economics

Area of Specialisation: Economics, Globalization and
International Trade



Ms. Shivangi Bhatia

PhD (Pursuing), MBA (Finance), B.Com. (H)

Area of Specialisation: Financial Modelling, Data
Analysis, Law , Operation Research

DEPARTMENT OF MECHANICAL & AUTOMATION ENGINEERING

Courses Offered

B. Tech (MAE) - 4 Years

**B.Tech (MAE)+MBA – 6 Years
(Dual Degree)**

**M.Tech. (Robotics &
Automation) - 2 Years**

Ph.D.

The Department of Mechanical & Automation Engineering was established in 1998. The Department offers B.Tech in Mechanical and Automation Engineering, 6 Year Dual Degree [B.Tech(MAE)+MBA], M.Tech (Robotics and Automation) and Ph.D in different specialization of Mechanical and Automation Engineering.

The Department has highly qualified and experience Faculty and Staff members. Faculty is actively involved in various research and professional activities along with dedicated teaching. All Faculty members have been contributing to research and development in form of patents and publications in reputed peer reviewed journals. A number of MNCs have been collaborating with Department and have contributed to Research & Development of Department. Every year meritorious students secure admission to the courses offered by the Department. Ph.D scholars have also received favourable response with various government research grants being sanctioned. Students and Faculty members have been actively participating in National and International conferences and have research contributions in areas such as Design Engineering, Robotics, CAD/CAM/CIM, Mechatronics, Automation, Computational Engineering, Advance Manufacturing Systems, Automotive and IC Engines. Department has an active Student Chapter under the aegis of Society of Automotive Engineers (SAE) and American society of Mechanical Engineers (ASME). Students of MAE Department have been participating in many car design competitions such as Baja, Supra, Effi-cycle, Shell Eco Marathon, ISIE and have been bringing laurels to the University. Industrail visits, Workshops and Expert Lectures are regularly organized and received active student participation.



B. Tech. (Mechanical and Automation Engineering)

B. Tech. (Mechanical and Automation Engineering) is a four-year course designed for class XII pass out students who look forward to make a career in Mechanical and Automation Engineering. Besides giving a through grounding in basic sciences and engineering subjects the curriculum in mechanical and automation engineering emphasises on deep understanding of applied mechanics, microprocessors, machine design, heat transfer, refrigeration and air conditioning, machine tools, metrology, robotics, mechatronics and CAD(CAM) etc. The department has well-equipped laboratories in related fields and students are exposed to various modern equipment in the area of mechanical and automation.

B. Tech. (Mechanical and Automation Engineering) + MBA (Dual Degree Course)

B. Tech. (Mechanical and Automation Engineering) + MBA course is a six-year course designed for class XII pass out students who look forward to a career in business management with base of Mechanical Engineering. The integrated degree course is a combination of two specialized disciplines in one curriculum. The course will equip students with technical knowledge along with the skills to manage the technological advances optimally, preparing them for the corporate world. The focus of this course is on skill development of students so that they are able to create and manage technology based businesses. Time and expenses are saved as candidates need not to appear for the entrance exam and selection process twice (at UG and PG level). Students pursuing MBA will have a comprehensive understanding of the fundamentals of business management and the opportunity to pursue chosen areas of specialization which can be either Mechanical and Automation Engineering or Management.

Industry in manufacturing field require managers who possess managerial ability, financial acumen, marketing skills, human resource management, production management, Knowledge of corporate governance, company laws, along with knowledge of Mechanical Engineering. This integrated course will give both technical and managerial skills and prepare students for a successful managerial career ahead.

M.Tech. (Robotics and Automation)

M.Tech. specialization with Robotics & Automation will enable students to serve the Industry requirement for implementation of new and smart technologies covering methods of synthesis, analysis & optimization of various robot's configurations and mechanisms. The increased demand of current industry for efficiencies and safety has led to a greater need for professionals with an added expertise in the field of Robotics & Automation. Robotics & Automation combines design, construction, operation, and application of robots coupled with computer based control systems, sensory feedback, and information processing. The design of a robotic system puts together principles of Electronic Engineering, Mechanical Engineering and Computer Engineering.

Ph.D. Course

Research work in Department of Mechanical and Automation Engineering is being pursued on following areas:

1. Performance and Emission Analysis of Alternate Fuels in IC Engines;
2. Fabrication and Studies of Nano-lubricants for Engineering Applications;
3. Development of Micro and Nano Composites for Different Engineering Applications;
4. Studies of Nano Coatings on Metal Surfaces;

5. Fabrication and analysis of composites;
6. Performance and Analysis of Flexible Manufacturing systems;
7. Studies on development of Temporo mandibular joint prosthesis;
8. Fabrication and analysis of Hand Prosthesis;
9. Studies on High strain energy composites;
10. Study of Friction stir welding application;
11. Energy and Exergy analysis of combined cycle power plant;
12. Energy and Exergy analysis of steam power plant.

Lab Infrastructure:

Department provides Laboratory infrastructure for the smooth conduct of practical sessions for the following:

- Robotics & Mechatronics Lab
- Computer Aided Manufacturing Lab
- Computer Aided Design Lab
- Engineering Measurement and Metrology Lab
- Machine Shop & Metal Cutting Tool Design Lab
- Engineering Graphics Lab
- Fluid Mechanics Lab
- Strength of Material Lab
- Automobile Engineering Lab
- Theory of Machines Lab
- Engineering Mechanics Lab
- Material Science Lab
- Refrigeration and Air conditioning Lab
- Thermal Engineering Lab
- Heat transfer Lab
- Central Workshop with following shops
 - a. Foundry
 - b. Welding
 - c. Sheet Metal
 - d. Fitting
 - e. Carpentry
- Project Shop.

On-going Projects:

Department of MAE has received a grant of Rs. 21.5 lakh for the project titled "Design and development of customized temporo mandibular joint prosthesis for patients suffering from end stage TM disorders" for duration of 3 years w.e.f April, 2018 from DST under "Young Women Scientist Scheme". Ms. Mehak Sharma, Research Scholar, Department of MAE has been appointed as Principal Investigator under the supervision and mentorship of Prof. Manoj Soni, for the said project.



Name : Prof. Nathi Ram Chauhan
Designation : Professor, Head of Department and Training & Placement Officer
Qualification: Ph.D- IIT Roorkee
M.Tech – IIT Roorkee
Areas of Specialization: Machine Design Engineering, Tribology (Fluid Film Bearings), FEM, Alternative Fuels, Composite Materials, Automation Engineering



Name : Prof. Manoj Soni
Designation : Professor and Additional Registrar (HR)
Qualification: Ph.D – Delhi College of Engineering
M.Tech – IIT Delhi, B.Tech
Areas of Specialization: Mechatronics, Production Engineering, Prosthesis



Name : Dr. O.K. Singh
Designation : Associate Professor
Qualification: Ph.D – IIT Delhi
M.Tech (Thermal Sciences – Gold Medallist) – Aligarh Muslim University,
Graduation Certificate in Marine Engg. From Directorate of Marine Engineering Training
Areas of Specialization: Thermal Science, Thermal Power Plants, Thermal Energy Systems, Refrigeration & Air conditioning



Name : Dr. Deepti Chhabra
Designation : Assistant Professor and Incharge (Public Relations)
Qualification: Ph.D. – DTU, Delhi
M.Tech & B.Tech from IGDTUW (erstwhile IGIT)
Areas of Specialization: Industrial Engineering, Manufacturing Automation, green Manufacturing and Supply Chain, Energy and Environment, Circular Economy and Industry 4.0



Name : Dr. Pankaj Tomar
Designation : Assistant Professor
Qualification: Ph.D.– IIT Delhi
M.Tech. – IIT Delhi
Areas of Specialization: Automobile Engineering, Mechanics Problems, Metal Forming, Numerical Techniques, Automation in Industry, Tribology, Green Manufacturing, Energy Problems



Name : Dr. Shipra Aggarwal
Designation : Assistant Professor
Qualification: Ph.D. – IIT Delhi
M.Tech – NIT Kurukshetra
Areas of Specialization: Industry Tribology



Name : Dr. Vivek Chawla
Designation : Assistant Professor
Qualification: Ph.D – NIT Kurukshetra,
M.Tech – DITE Delhi
PGDBA – Symbiosis Pune
Areas of Specialization: Management of Manufacturing Systems, FMS,
Automation, CAM and CIM Production
Engineering/Manufacturing Processes, Operations
Management, Engineering Graphics, Machine
Drawing



Name : Dr. Pooja Bhati
Designation : Assistant Professor
Qualification: Ph.D – IIT Delhi
M.Tech – Jamia Millia Islamia Delhi
B.Tech – IGIT
Areas of Specialization: Bio Materials, Scaffolds, Composites



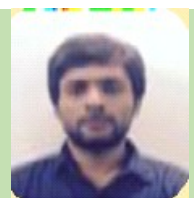
Name : Ms. Deepti Jaiswal
Designation : Assistant Professor
Qualification: Ph.D – Pursuing IIT Delhi
M.Tech SLIET, Longowal
Areas of Specialization: Welding & Material Science



Name : Mr. Ravinder Kumar
Designation : Assistant Professor
Qualification: M.Tech – IIT Kanpur
B.Tech – IIT Ropar
Areas of Specialization: Thermal Engineering & CFD



Name : Dr. Tina Chaudhary
Designation : Assistant Professor
Qualification: Ph.D. – Jamia Millia Islamia Delhi
M.Tech – IGDTUW, Delhi
Areas of Specialization: Robotics & Automation, Production



Name : Mr. Urfi Khan
Designation : Assistant Professor
Qualification: M.Tech – Jamia Milla Islamia Delhi
Areas of Specialization: Modelling, simulation and Optimization of
Production & Industrial Systems

IGDTUW – ANVESHAN FOUNDATION [TBI]

Indira Gandhi Delhi Technical University for Women (IGDTUW) has promoted and incorporated a separate Section 8 Company under the Companies Act, 2013 to propagate entrepreneurial culture and ecosystem among women, on 13th October 2016 with the support from Government of NCT of Delhi.

Government of NCT of Delhi has funded INR Two crores Fifteen Lakhs in three tranches to support IGDTUW Anveshan Foundation i.e. for Innovation, Entrepreneurship, Start-ups and Incubation related activities at the University Campus.

All kind of facilitation (pertaining to the start-up ecosystem) in five phases of complete incubation and venture development cycle i.e. i) Pre-incubation, ii) Incubation, iii) Acceleration, iv) Post-incubation and even v) Virtual Incubation are provided by Anveshan Foundation.

In the last financial year i.e. 2020-21 amid the pandemic, Anveshan Foundation has become NIDHI-TBI by Department of Science & Technology, Government of India with a support of INR Four Crores Fifty Lakhs.

Core Team

Dr. Amita Dev, Honorable Vice Chancellor IGDTUW is 'Chairperson' of IGDTUW Anveshan Foundation. Dr. Arun Sharma, Head, AI&DS Department is Managing Director of Anveshan Foundation. Apart from them, three more Senior Professors Dr. Ranu Gadi, Dean IRD, Dr. Jasdeep Kaur Dhanoa, Dean Academics and Dr. Manoj Soni from different engineering branches are also the directors of Anveshan Foundation, so that first mentoring to the students, scholars and start-ups promoters can be derived from all the technical streams. Dr. V K Arora has been working as the Chief Executive Officer of the company since its inception.

Facilities

In Pre-incubation, activities related to Motivation, Ideation, PoC, PoV, Innovation, Prototyping, MVP, Feasibility, Prior Art, Intellectual Property Right, Pitching Deck, Business Plan and Presentation skills are provided to the participants by Anveshan Foundation. There is total thirty student members working actively with the E-Cell (Entrepreneurship Cell). Since inception, many activities and events have been organized by the Incubation Center which include workshops, boot-camps, hackathons, industrial visits, inter college/University competitions, management development courses.

CISCO has established complete IoT and robotics Lab 'thingQbator' (worth INR 60 Lakhs) for Innovation through its CSR funds in the year 2018 through its partner organization NASSCOM Foundation in support with Defy and Li2. thingQbator has conducted four cohorts (of six months each) giving benefits to more than 300 students. More than a hundred projects in four cohorts have been initiated under this pre-incubation facilitation center.

GiZ India (a German organization) had signed a Contract with Anveshan Foundation worth INR 27.5 Lakhs for Strengthening Incubation & Start-up Ecosystem specially for Women Entrepreneurs. Under this contract twenty-two mentorship sessions, three workshops, three boot camps, four incubators meets and two Pitch/demo days were organized in sixteen months starting from January 2020 till April 2021. This initiative and support from GiZ India has benefited more than five thousands attendees all over the country.

Anveshan Foundation is conducting regular internships, pragmatic workshops and short term courses on a) Start-up Management, b) Innovation & Entrepreneurship, c) Digital Marketing, d) Python, e) Family Business & Entrepreneurship and in many more technical and non-technical areas for confidence building among aspiring women entrepreneurs.

Total twelve private limited companies are working as start-up 'Incubatees' with Anveshan Foundation. All of these incubatees are women enterprises. Out of twelve, ten incubatees are with investment, where Anveshan Foundation has provided seed fund to these incubatees.

Details of all these incubatees along with their products& services are available on the website of Anveshan Foundation i.e., www.anveshanfoundation.org. Incubation Center provides facilities for Company Incorporation, fully furnished air-conditioned office space, complete ICT and free consultancies in technical, business and strategic front to all of its incubatees. As mentioned earlier, there is also a provision of Seed Fund against equity for 'Incubatees with Investment'.

IGDTUW Anveshan Foundation has a pool of consultants and mentors associated with it to augment the businesses of its incubatees, which is an essential part of Acceleration Phase. Support in Product Development, Product Refinement, Marketing, Human Resources, Supply Chain, Franchise Models and Bargaining with Investors are provided by IGDTUW Anveshan Foundation.

Incubation Center has also signed tenMoUs with other colleges, institutes and universities to facilitate and establish incubation centers in their premises and to accelerate and diversify businesses of there students andIncubatees through various channels.

After the incubation period, at the phase of post-incubation hand holding support continues from Anveshan Foundation in consultancy, laboratories, innovation support and portfolio management. Through virtual mode, Anveshan Foundation is helping many other start-ups all over the country.

Applicants for the Fifth Batch

IGDTUW Anveshan Foundation is inviting application for its fifth batch of Incubatees. Any women candidate can apply online/ offline. Anveshan Foundation is very much open to the external applicants/ entrepreneurs. We give preference to the students and scholars of IGDTUW.

Students who are going to join IGDTUW are welcome to contact/ visit Anveshan Foundation for their business ideas and plan. They can think of their start-ups (Women enterprises) with their classmates, friends or even family members.

An introductory session will be conducted by Anveshan Foundation during the orientation program of all the new/ fresh students.

Achievements

- a) Anveshan Foundation has incubated a total of 12Incubatees till date. All these incubatees are private limited companies and received a seed Grant of total INR 37.0 lakhs.
- b) Anveshan Foundation has collaborated through MoU/ Contract with NASSCOM Foundation, Nexus Incubation Hub, GiZ for getting support for Pre-incubation activities.

- c) Organized two days Hackathon (as Inter college/University Business Plan Competition) in four consecutive years (year 2017, 2018, 2019 and 2020) where responses from more than 60 teams were received from different colleges of Delhi NCR. Apart from that, Anveshan Foundation has organized many events such as workshops, boot-camps, mentoring session and MDPs. (details are available in the website) FDPS by Cisco (Webinars)
- d) Our Incubatees' success stories have been covered in Primetime of DD, ZEE, Harvest Channels and leading newspapers.
- e) Our two incubates: ETI Labs Private Limited and Nature Fabtech Private Limited have crossed turnover of INR 25 Lakhs, individually.
- f) Ms. Manasi, director of ETI Labs received Gandhian Young Technology Innovation (GYTI) award by Dr. Harsh Vardhan in July 2019.
- g) Ms. Manasi Mishra has represented Anveshan Foundation TBI at DST Startup Zone in 28th convergence India and 06th Smart cities India EXPO during March 24-26 2021 at Pragati Maidan and showcased the products and services of ETI Labs.
- h) Ms. Manasi Mishra has recently been awarded by DMA's, All India Women Entrepreneurs Award on 22nd April 2021.
- i) Ms. Dipti Chourasia was selected in Aspiring Women Entrepreneurship and got two weeks training in Austin Texas.
- j) SteamEdu Learning is continuously conducting training courses in all the domains of STEAM pan India including areas like Leh Ladakh. Promoters of the company had got appreciation from DRDO Leh – Dihar (Defense Institute of High-Altitude Research) for Social Work among women/ girls.
- k) SteamEdu has recently launched an unique initiative 'STEAM Talks' video interviews featuring 'Talks on STEAM' from eminent personalities all over the world.
- l) Sakshi and Peeyush, Directors of Nature Fabtech got export orders from USA and European countries in the year 2019 and 2020 bamboo fabric made infant clothing.
- m) Ms. Kanchan Kashyap, Director and CEO of Provotex Resources has designed more than 20 patterns of its own jute bags for various purposes and have fetched orders from many Indian organizations.
- n) Ms. Kshitija from Raahee has developed an application (RaaheeApp) on Mental Health and has been received many national awards.
- o) Uaceit Ventures was recognized as one of the promising organizations in the student's category by Honorable Minister of Women & Child Development, GoI.

Any Woman, Women Entrepreneur/ Women Enterprise looking for 'Start-up, Mentorship and Skilling Support' from Anveshan Foundation may contact the Chief Executive Officer directly without any hesitation.

Dr. V K Arora | Cell: +91 98 11 59 30 59| Email: ceoincubation@igdtuw.ac.in

IGDTUW SOCIETIES/CLUB

MANAGEMENT SOCIETIES/CLUBS

- ❖ HUUMANOID (The HR Society)
- ❖ ZOSH (Marketing Society)
- ❖ MUDRA (The Finance and Investment Society), Department of Management
- ❖ SAMANVAY (Economics and Research society)
- ❖ VARTTA (Business New Society)
- ❖ The Fine You (Mental & Physical Health Club)

TECHNICAL SOCIETIES/CLUBS

- ❖ ACM Student Chapter
- ❖ Robolution
- ❖ LEAN IN
- ❖ CSI Student Branch
- ❖ IEEE Student Chapter
- ❖ ENACTUS
- ❖ American Society of Mechanical Engineers (ASME) Chapter
- ❖ AI Club – Artificial Intelligence Hub

CULTURAL SOCIETIES/CLUBS

- ❖ Synergy Sports Club
- ❖ Greensphere Society
- ❖ RAHNUMA- Dramatics Society
- ❖ B.H.A.V (Behold an Architect's View)- The Role Play Society of IGDTUW
- ❖ Zena- Fashion Society
- ❖ Hypnotics-Western Dance Society
- ❖ ANTARGAT - Creative society
- ❖ ROTARACT Club
- ❖ INSTINCT
- ❖ Techno Literate
- ❖ TARANNUM-Music Society
- ❖ OSA Student Chapter- The Optical Society



ADMISSION GUIDELINES FOR WINTER SESSION 2021

PH.D. ADMISSIONS

Eligibility Criteria

The minimum entry qualifications for Full-Time/Part-Time Research Scholars are as follows:

- 1) **For Engineering:** M.E./M.Tech. Degree or equivalent from a recognized University/ Institution in the relevant discipline with minimum of 60% marks in aggregate or its equivalent CGPA in the point scale and B.E./B. Tech. or equivalent with minimum of 60 % marks in aggregate or equivalent CGPA.
- 2) **For Computer Applications:** MCA from a recognized University/ Institution with minimum of 60% marks in aggregate or its equivalent CGPA in the point scale and Graduation Degree (with Sciences and Mathematics) with minimum of 60% marks in aggregate or equivalent CGPA.
- 3) **For Sciences:** Masters Degree in the relevant discipline from a recognized University/Institution with 60% marks in aggregate or its equivalent CGPA in the point scale and undergraduate degree in the relevant discipline with 60% marks in aggregate or equivalent CGPA.
- 4) **For Humanities:** Masters Degree in the relevant discipline from a recognized University/Institution with 55% marks in aggregate or its equivalent CGPA in the point scale and undergraduate degree in the relevant discipline with 55% marks in aggregate or equivalent CGPA.

Note:

Applicants belonging to Schedule Caste, Schedule Tribe, OBC (Non Creamy Layer) and Differently-abled Categories will be given 5% relaxation in minimum entry qualification marks.

An applicant is eligible for Part-Time Research Scholar (Sponsored)/ Full-Time Research Scholar (Sponsored), provided she fulfils the following conditions:

- 1) The Applicant possesses the minimum entry qualifications for the degree as mentioned in Eligibility Criteria.
- 2) The applicant is presently employed under any of the following categories :
 - a. Applicant is working in organizations which have MOU with IGDTUW.
 - b. Applicant is working on Full-Time basis (regular/adhoc/contract) in a National Level R&D Lab/ a reputed organization/ recognized educational institution/ University/ PSU/ Corporate/ Industry registered under Companies Act.
- 3) The Applicant possesses at least two years of relevant work experience in the categories, as at (ii) b.
- 4) The applicant gets a NOC from her employer, at the time of provisional registration.

IGDTUW-Junior Research Fellow (IGDTUW-JRF)

An applicant shall be eligible for Junior Research Fellowship instituted by IGDTUW provided she fulfils the following conditions:

- 1) She possesses the minimum eligibility qualifications.
- 2) She has qualified UGC-CSIR-JRF/NET examination or has qualified GATE with a score above the minimum cut off or has qualified Research Aptitude Test (RAT) examination. A person who has appeared in the above examinations but is awaiting results may also apply. However, she shall be required to produce a valid documentary evidence of having qualified the examination at the time of interview.
- 3) She is not receiving any financial assistance from any other sources.

Areas of Research and No. of Seats: The Ph.D. Program is being offered in the following disciplines subject to the availability of vacancy in the relevant research field:

Department	Research Areas	*Tentative Seats for FT/PT
Computer Science & Engineering	Big Data Analytics, Speech Translation Systems, Opportunistic Mobile Networks, Artificial Intelligence, Web Technologies, Natural Language Processing, Fuzzy Database Management, Intelligent Computing, Natural Language Processing, Data Analytics, Computer Education, Embedded systems, Mobile Computing, Wireless Sensor Network, Real Time Systems, Data Mining, Algorithms, Data Science, Data Analytics, Sentiment Analysis & opinion Mining, Text Mining, Social Network Analysis, Fuzzy Theory, Information Security, Cyber Security, Image Processing, Video Retrieval, Image Retrieval, Machine Learning, Internet of Things, Computer Networks, Algorithms Design, Machine learning, Deep learning, soft computing, social media analytics, intelligent computing, big data analytics, social and semantic web.	08
Information Technology/ Computer Applications	Software Engineering / Software Testing, Software Project Management, Information Security, Secure Wireless Networks, Software Eng., Big Data Analytics, Cloud Computing, Business Intelligence, Software Reliability, Neural Networks, Data Communication Networks, Knowledge engineering and semantic web, Data analytics and machine learning, Natural language processing, graph theory, Service oriented wireless sensor networks, Edge and Fog computing, Data Aggregation in wireless sensor networks, Routing and MAC layer protocols for wireless sensor networks, Machine Learning, Pattern recognition, Image processing,	09

	Gait Analysis, Healthcare, Cryptography, Cyber Forensics, Cyber Security	
Electronics and Communication Engineering & Electrical Engineering (under ECE Department)	Optical Communication, Digital Signal Processing, Digital VLSI Design, Strategic MGT, Telecom MGT, VLSI, Analog, Mixed Mode Circuits and Systems Design, Embedded System, Computer Vision, Multimedia Security, Medical Image Processing, VLSI Design, Low Power CMOS Circuits and Analog Integrated Circuits, Micro Electronics, Designing of Fractional Order Differentiators and Integrators, Optimization of Operators, Evolutionary Algorithms, Digital Image Processing, Digital Signal Processing Machine Learning, Digital Image Processing (Medical), Big Data Analytic, Combinatorial optimization (Metaheuristic), Decision Science, Power Systems, Power Electronics, Control Systems, Electrical Engineering & Renewable Energy Sources.	04
Mechanical and Automation Engineering	Machine Design Engineering, Tribology Fluid Film Bearing, FEM Computation Engineering, Vibration, Alternate Fuels in IC Engines, Composite Material, Robotics & Automation, Manufacturing & Automation, Production and Automation Engineering, Prosthetics, Thermal Science and Engineering, Thermal Power Plant, Refrigeration and Air- Conditioning, Tribology, Applied Mechanics, Green Manufacturing, Mechanical Engineering, Automation, Tribology of fluid film bearings, Robotics and Automation, Production Engineering and Management, Flexible Manufacturing Systems, Composite Materials, Industrial Engineering and Project Management. Biomaterials, Biomedical Devices, Polymers, Polymer Processing, Composites and Scaffolds, Industrial Engineering, Manufacturing Automation, green Manufacturing and Supply Chain, Energy and Environment, Circular Economy and Industry 4.0	17
Applied Science & Humanities (Physics, Chemistry, Mathematics, English)	Atmospheric Sciences (carbonaceous aerosols, organic compounds and trace gases), Nano-composites for waste water treatment, Green Corrosion Inhibitors, Nanotechnology, Nano materials, Thin Film Technologies, Applied Optics, Digital Image Processing, Optical Information Processing, Panoramic and 3-D Imaging, Materials Science, Nano-science and Nanotechnology, English Literature, Communication Studies	Physics: 03 Chemistry: 02 English: NIL Mathematics: 04
	Total	47

***No. of seats and Research Areas are tentative and may vary depending upon the desired research area of the applicant and availability of seat with the supervisor.**

Admission Procedure

Admission to the Ph.D. Program will be common to the two categories (Full time and Part Time) of applicants.

- 1) Admission shall be made on the basis of a written Test viz. RAT followed by an interview.
- 2) The RAT Examination shall be qualifying only with qualifying marks as 50%. A relaxation of 5% marks (from 50% to 45%) shall be allowed for SC/ST/OBC/Differently abled (PD) category to qualify the RAT Exam.
- 3) The syllabus of the RAT examination shall consist of 50% of Research Methodology and 50% subject specific. (Please refer www.igdtuw.ac.in)
- 4) The application fee of Rs. 1000/- deposited by the applicants is **Non-Refundable**.
- 5) The RAT examination shall be waived off for the following applicants subject to the fulfilment of eligibility qualifications, and such applicants shall be allowed to appear in the interview directly:
 - a. Full-Time female teaching staff (Faculty) of IGDTUW.
 - b. Sponsored applicants from organizations having MOU with the University.
 - c. Applicants who have qualified UGC-CSIR-JRF/NET Or have qualified GATE with a score above the minimum cut-off and successfully completed requisite Master's degree.
 - d. Foreign students who apply through Ministry of Human Resource Development or foreign students under a Cultural Exchange Scholarship Course of Government of India.
- 6) The exempted category applicants as per point (5), in a subject will not be required to appear for the RAT exam.
- 7) The RAT shall be conducted in the following disciplines:
 - a. Electronics and Communication Engineering (ECE)
 - b. Computer Science / Information Technology/ Computer Applications
 - c. Mechanical & Automation Engineering
 - d. Chemistry
 - e. Maths
 - f. Physics
 - g. Electrical Engineering (under the Department of Electronics and Communication Engineering)
- 8) The Syllabi and other related details of the RAT Examination are available on the University website.

- 9) All applicants taking admission in the Ph.D. Program shall be bound by the Ph.D. Ordinances and Regulations of the IGDTUW
- 10) The applicants shortlisted for interview are required to discuss their research interest/ area during the interview. The interview shall also consider the following aspects viz. whether:
- The person should possess the competency for the proposed research.
 - The research work can be suitably undertaken at the University.
 - The proposed area of research can contribute to new/ additional knowledge.

Financial Assistance-

1) **A stipend of Rs 10,000/- per month will be given to all Full-time Research Scholars for a maximum period of five years or till completion of their Ph.D., whichever is less. The Research Scholars would also assist in Academic/Administrative works in their respective Departments apart from their Research work. Please refer <https://www.igdtuw.ac.in/pdfs/Guidelines%20for%20Financial%20assistance%20to%20Full%20Time%20PhD%20scholars.pdf> for more details.**

2) The University may provide financial assistance to few Full-Time Research Scholars with good teaching skills and appoint them as Junior Research Fellow (JRF) / Senior Research Fellow (SRF) as per UGC norms.

- These fellowships shall be distributed on the basis of need across all departments by Dean (R&C) in consultation with the Vice Chancellor.
- The Terms and Conditions of the fellowship may be amended from time to time.
- All provisions of the prevailing Ph.D. Ordinance of the University shall be applicable on the JRF/SRF and allocated Supervisor(s).

3) Fellowship Amount:

S. No	IGDTUW Fellowship for Program Ph.D.	Fellowship (Per Month)
1.	*IGDTUW-Junior Research (JRF) Fellow	Rs. 31,000/- + HRA
2.	Full Time Ph.D. Scholars	Rs. 10,000/-

* The Terms & Conditions for IGDTUW-JRF are available on the University website.

4) In our University to boost the research aspects and promote good quality research papers for publication in reputed Journals, cash awards are given to the researchers in the recognition of importance of their published research work and to motivate individual excellence in research. The award is granted for the Journal papers published in Science Citation Index (SCI) or SCI expanded or SCOPUS.

Tuition Fee Waiver: The regular female academic staff of the Indira Gandhi Delhi Technical University for Women may apply for 50% tuition fee waiver.

Reservation/Relaxation for Ph.D Program:

Reservation of seats for Scheduled Caste, Scheduled Tribe, OBC-NCL and Differently Abled (PD) applicants will be as per Government rules.

Seat Matrix for Ph.D. (Full Time/Part-Time)

Tentative seat matrix for the Ph.D. Program Admissions for the Winter session 2021-22

Program	*Tentative Vacant seats for FT/PT	GEN	SC	ST	OBC (NCL)	PD
Ph.D. (CSE)	08	03	01	00	04	00
Ph.D. (IT) Ph.D. (Computer Applications)	09	03	02	02	02	00
Ph.D. (ECE) Ph.D. (Electrical Engineering)	04	01	01	00	01	01STPD
Ph.D. (MAE)	17	08	02	02	04	01GNPD
Ph.D. (Physics)	03	01	00	00	01	01GNPD
Ph.D. (Chemistry)	02	02	00	00	00	00
Ph.D. (Maths)	04	02	01	00	01	00
Ph.D. (English)	00	00	00	00	00	00
TOTAL	47	20	07	04	13	03

***Note:** No. of seats are tentative and may vary depending upon the desired research area of the applicant and availability of seat with the supervisor.

Admission Calendar for Winter Session Ph.D. Admissions-2021

Opening of Admission portal for receiving online application of Ph.D.	07.12.2021
Last date for submission of duly filled application form for Ph.D.	27.12.2021
Conduction of RAT (Research Aptitude Test for Ph.D.) (Offline)	02.01.2022
Result Declaration of RAT	03.01.2022
Display of Shortlisted candidates for Interviews	04.01.2022
Conduction of Ph.D. Interviews (for all departments) (Offline)	06.01.2022 to 08.01.2022
Display of Selected Candidates	10.01.2022
Duration of Online Payment of Full Fee	11.01.2022 to 13.01.2022
Ph.D. Counselling (Offline)	14.01.2022
Formally Notified Last date of admission for Ph.D.	15/01/2022
Counselling for Waitlisted Candidates (if any) and Online Payment of Full Fee.	16.01.2022 and 17.01.2022

Special Admission Drive will be notified on the website subject to the availability of reserved category vacant seats for a particular category, after completion of the counselling.

FEE STRUCTURE

Sl. No.	Particular	Fee in AY 2021-22
1	Tuition Fee	19,000
2	Non Govt. Component	
2.1	Student Welfare	7,000
2.2	Facilities and Services Charges	4,000
2.3	Examination Fee	3,000
	Grand Total	33,000

Note: - In addition to above fee structure, the following fee are also required to be paid at the time of admission in all programs: -

- (i) Security Deposit (Refundable) : - Rs. 5,000/-**
- (ii) One Time Alumni Fee : - Rs. 2,000/-**
- (iii) Hostel and Mess fee, if applicable, will be paid separately.**

AGE CRITERIA

For admission to Ph.D. program there is no minimum & maximum age criteria.

COUNSELLING SCHEDULE

Detailed schedule of first counselling/admissions indicating the number of qualified applicants for different programs, to be called for counselling will be notified on the website (www.igdtuw.ac.in).

If an applicant does not attend the counselling she will have no claim on the seat already allotted to the applicant. The waitlist will be executed supervisor wise, only if the selected candidate of the respective supervisor does not report the university on day of counselling.

Applicants are advised to check the website (www.igdtuw.ac.in) regularly for updates. No separate communication will be sent.

ANTI RAGGING POLICY

The University adopts Zero Tolerance policy on ragging. Ragging is completely banned on the campus. Ragging in any form is strictly prohibited within the premises of the University campus and hostel. The University shall severely punish the student found indulged in ragging.

WITHDRAWAL OF ADMISSION

The students admitted in Ph.D. program may apply for withdrawal of admission (if she desires) and her case for refund of fee will be handled as per UGC notification.

DISCLAIMER:

- (i) The University reserves the right to amend the rules and regulations, whenever and wherever considered necessary and appropriate, in view of the requirements/ Govt. Policy Decisions coming time to time. Such amendments will be intimated to the students through university portal. The students are advised to regularly keep on checking the University website for changes time-to-time. The University disclaims liability for loss or damage of whatever nature and extent resulting directly or indirectly for not following Rules/Regulations/Directions/ Policy etc. circulated by the University on website and Admission Brochure.
- (ii) Students submitting the admission form of any program to University are assumed to have read the rules and policies related to eligibility, provisional admission, cancellation of admission and refund of fees etc. and disclaimers mentioned above and agree to the same, as mentioned in the admission Brochure.
- (iii) It will be the responsibility of the applicant to prove equivalence of degree and/or validity of reservation document as the case may be.
- (iv) This admission brochure is only for information and guidance of candidates seeking admission. The contents are likely to change without notice. This does not constitute to be a legal document.

Reach us



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