







### Department of Electronics & Communication Engineering





### MANAGEMENT BOARD

### CHAIRMAN'S **DESK**

I am proud to announce that the Vishveshwarya Group of Institutions has been nurturing itself. Over the years, our institution has continually evolved, adding new dimensions to its illustrious legacy while remaining deeply committed to serving its community. Our unwavering dedication to excellence has been reflected in the consistently outstanding academic achievements of our students. Behind the success of our students lies the dedication and expertise of our highly trained faculty.

Their passion for teaching and mentorship has been instrumental in shaping the minds of tomorrow's leaders. Furthermore, our commitment to holistic education extends beyond the classroom. We believe in providing students with a well-rounded learning experience that encompasses not only academic rigor but also personal growth and character development. As we reflect on our journey so far, we are filled with gratitude for the unwavering support of our students, parents, faculty, and staff. It is through their collective efforts and dedication that we have been able to achieve our shared vision of excellence in education.

> Mr. Sunil Jindal Chairman

### COO DESK

Dr. Poornima Sharma, the Chief Operating Officer at Vishveshwarya Group of Institutions, is a distinguished leader in the realm of higher education. With a Ph.D. in Education and an M.Phil. degree, she embodies a profound commitment to academic excellence and visionary leadership. Her tenure at VGI has been marked by a relentless pursuit of excellence across various facets of academia, including program development, marketing, and promotion. Her strategic acumen and adept resource allocation have played a pivotal role in elevating the institution's standing in the educational landscape. Beyond her exemplary leadership in operational matters, she is deeply engaged in professional development, constantly staying attuned to emerging trends and best practices in higher education.

She is a prominent figure in national and regional conferences, where her insights on strategic planning, change management, and student success resonate as a testament to her expertise and thought leadership.Dr. Poornima Sharma stands as a beacon of inspiration within VGI, driving innovation and excellence to shape the future of education.

#### Dr. Poornima Sharma COO

### ADVISOR **DESK**

VGI has set up a number of institutions providing quality education right from school level to post-graduate level. The institutions, wherever required, have affiliations from various universities and approval of respective regulatory bodies. In this era of globalisation, quality is the only mantra for survival of any organisation. All the institutions of the Group have the state-of-the-art-facilities, highly competent and dedicated manpower and visionary management to provide quality and value based education.

Research and Development is an integral part of all the institutions of the Group that exposes the faculty and the students to the latest developments in their respective fields and also provides them the opportunity to interact with the experts across the country. The institutions of the Group have the distinction of implementing various schemes.

#### Dr. S.P. Pandey Advisor



The word Education and Knowledge are the two different branches cropped up from one root of academics, yet ironically one is attainable and the other isn't. The exact metaphor is applicable for Employment and Employability, though both of them begins from social need but in the present context of time they have their own conceptual differences. Employment gives the essence of getting what the industry is providing us while employability is what we can provide the industry. On one hand where the idea of employment makes the youth dependent there on the other hand the quality of employability makes the youth confident enough to choose and bargain for the job he is looking forth. This is that exact trumpet which VGI has started to blow in the cloak of 'Pied Piper'. There's definitely going to be major turn -around but at the same time the fact is every significant turn-around has its own repercussions and criticism. The cogitation of various certification courses along with regular university curriculum, churning of holistic trait, balancing the budding technologies, catering the demand of AI, MI, Business Intelligence, Cloud Computing, IOT, Image Processing may sound metaphysical to those who are ignorant from the reality that Life is to bolster key skills and one must let the budding technologies bloom within himself. The term 'Job Assurance' is simply to bridge the gap between the incumbents and arbitrariness. I wish the students to become the Alchemist from the Metaverse of Knowledge, Wisdom and Execution.

> Dr. Amit Kr. Agarwal Dean-Acedemics





#### **Dr. Prachi Tripathi** Head of the Department

The Department of Electronics & Communication Engineering and Electrical Engineering was members for taking care of academic and other requirements of the students. It offers B. Tech. in Electronics Engineering with intake of 60 students and M. Tech. in Electronics and Communication Engineering with intake of 12 students. The Board of Studies of the Department regularly updates the syllabus to meet the requirements of Industry and Academia. The Department is having well equipped labs and software for Virtual Instrumentation, VLSI Design, PCB Design, Signal Processing, Optical Networks etc. Various extracurricular activities are regularly organized by the students under the aegis of Association of Electronics Engineers for their overall development. The students of the Department are well placed in Govt. Sector, Private Sector, MNCs, Civil Services, Engineering Services, Academics and R & D. A good number of students also go for higher education in IISc, IITs, IIMs and in reputed foreign universities for masters and doctoral programs.

The Faculty of the Department is well qualified and associated with Institutes of repute like HBTU, IISc, NITs and has published several papers in referred Journals and Conferences of National and International repute. The Faculty members of the Department are continuously involved in R & D activities with their research students. Several National Level Seminars, Conferences, Faculty Development Programmes, Expert Lectures, Workshops etc. have been organized by the Department. The Department is also growing in terms of Infrastructure.

### Vision

The vision of the department is to be recognized globally as a premier Department of Electronics and Communication Engineering for value based education, interdisciplinary research and innovation

### **Mission**

### To achieve the vision, the department will ensure

•To develop and create strong foundation of engineering basic sciences.

•To encourage lifelong learning in students to enhance their performance.

•To impart academics and emotional intelligence in students to perform with energy, erudition, devotion and achievements.

•To inculcate personal integrity, human values, professional commitments and ethics in students.



#### PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- •PEO1: Engineering Graduates will excel in Electronics & Communication fields both in the industry and academics by analyzing the requirement technically and applying their knowledge in a professional manner.
- •PEO2: Will enable Engineering graduates effectively solve engineering problems and develop through research advanced Electronics & Communication devices and products.
- •PEO3: Engineering graduates will be capable of applying their knowledge both individually and as part of a team. They will be able to effectively communicate the same through the required media.
- •PEO4: Graduates will be capable of realizing the untoward and hazardous impacts of their contributions/innovations and keep ethical and societal values and responsibilities before individual achievements.

•PEO5: Keep pace with the ongoing improvements and advancements in the field of Electronics & Communication and not only incorporate but carry forward the same.

#### PROGRAM OUTCOMES ENGINEERING GRADUATES WILL BE ABLE TO:

•Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex Electronics and Communication Engineering problems.

- •Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- •Design/development of solutions: Design solutions for complex Electronics and Communication Engineering problems and design system components or processes

that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

- •Conduct investigations of complex problems: Use researchbased knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- •Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- •Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- •Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- •Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- •Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- •Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological changes in the field of Electronics and Communication.

### PROGRAM SPECIFIC OUTCOMES (PSOs)

- •PSO 1: Graduates of the program will be able to analyze real world engineering problems in the field of electronics and communication engineering.
- •PSO 2: Graduates of the program will be able to design and develop systems/processes based on core concepts of electronics and communication engineering to provide solution to multidisciplinary engineering problems.
- •PSO 3:Successful Career and Entrepreneurship: will be able to employ best knowledge of electronics components, environments and platforms, to identify and build innovative career option, and enthusiasm for higher studies.

Vishveshwarya Group of Institutions organized an industrial visit for B.Tech+ Employability and BCA+ Employability students to Cumint Private Limited in Sector 63, Noida.During their time at Cumint Private Limited, students experienced firsthand the intricacies of full-stack development, learning about infrastructure, technologies, and methodologies . Special thanks to our COO, Dr. Poornima Sharma, Dean Academics, Prof. Amit Kumar Agarwal, Placement Officer, Mr. Nitin Gaur, and Coordinator, Mr. Akshat.

The vision of VGI is to prepare students for modern challenges and future industries, fostering creativity and adaptability in a rapidly evolving landscape.



### **STUDENT ACHIEVEMENTS**

We are proud to announce that our remarkable student, Mr. CHITRANSH GUPTA, from the department of EE (4th year), has been selected for four prestigious government sectors: UPPCL, Delhi Jal Board, NPCIL India Government, and POWER Grid Engineer. Furthermore, his shortlisting as an electrical scientist at the renowned 'Bhabha Atomic Research Centre' adds another accolade to his impressive repertoire. He also had the opportunity to meet Mr. Sunil Jindal, Chairman of VGI, Dr. Poornima Sharma, COO of VGI, Dean of Academics Prof. Amit Kumar Agarwal, Mr. AK Shahi (Head - PR & Corporate Communication) and Dr. Prachi Tripathi (HOD, EE), and took their blessings. He expresses deep gratitude to the college, faculty, and mentors for their invaluable support.

This achievement not only reflects positively on CHITRANSH GUPTA but also underscores our VGI's unwavering commitment to nurturing talent and fostering excellence.







### **STAFF ACHIEVEMENTS**

#### **D**r. Prachi Tripathi

- •Dr. Prachi Tripathi Paper on title "Arduino based polygraph test using skin sensation" Advancements and Key Challenges in green energy and Computing Journal of Physics : Scopus Indexed
- •Presented Paper" Relative Rendition Dissection of MIMOOFDM-IDMA and MIMO-OFDM Scheme for Acoustic Assertion h DOCTORAL SYMPOSIUM ON COMPUTATIONAL INTELLIGENCE (DOSCI 2023), organized jointly by Institute of Engineering & Technology, a constituent Institute of Dr. APJ Abdul Kalam Technical University Lucknow, India and Bhagwan Parshuram Institute of Technology, Delhi, India in association with University of Calabria, Italy on 03rd March 2023,This paper is published on SPRINGER NATURE (SCOPUS INDEXED)
- •Currently Guiding Ph.D scholar Ms.Poonam Yadav (MANGALAYTAN UNIVERITY) as a Co-guide.



#### 2. Abhinav Srivastava

Abhinav Srivastava. "A critical review on techno-economic analysis of hybrid renewable energy resources-based microgrids. J. Eng. Appl. Sci.70, 148(2023). https://doi.org/10.1186/s44147-023-00290-w

Abhinav Srivastava "Estimation and Optimization of required infrastructurefor EV Buseswith case study in Delhi NCR," 11thinternational conference on Advancements in Engineering and Technology (ICAET-2023), Sangrur, Punjab, 2023, pp.261-266, ISBN No. 978-81- 924893-8-4.

Abhinav Srivastava "Optimize Charging and Discharging process using Model Predictive Controller in Electric Vehicle Charging Station," 11th international conference on Advancements in Engineering and Technology (ICAET-2023), Sangrur, Punjab, 2023, pp.261-266, ISBN No. 978-81-924893-8-4.

A.Srivastava,"Power Quality Improvement in Electric Vehicle Charging StationusingPIController,"20239thInternationa IConferenceonSignalProcessingandCommuni cation (ICSC), NOIDA, India, 2023, pp. 597-603, doi: 10.1109/ICSC60394.2023.10441460.

Srivastava, A.Optimal electrical vehicle-to-grid integration: three-phase three- level AC/DC converter with model predictive controller based bidirectional power management scheme. Electr Eng (2024).

#### 3. Abhishek Kaushik

A.Kaushik "Enhancement of Password Authentication System Using Vector(Graphical) Images" published in International Conference on Artificial Intelligence and Smart Communication(AISC),2023.

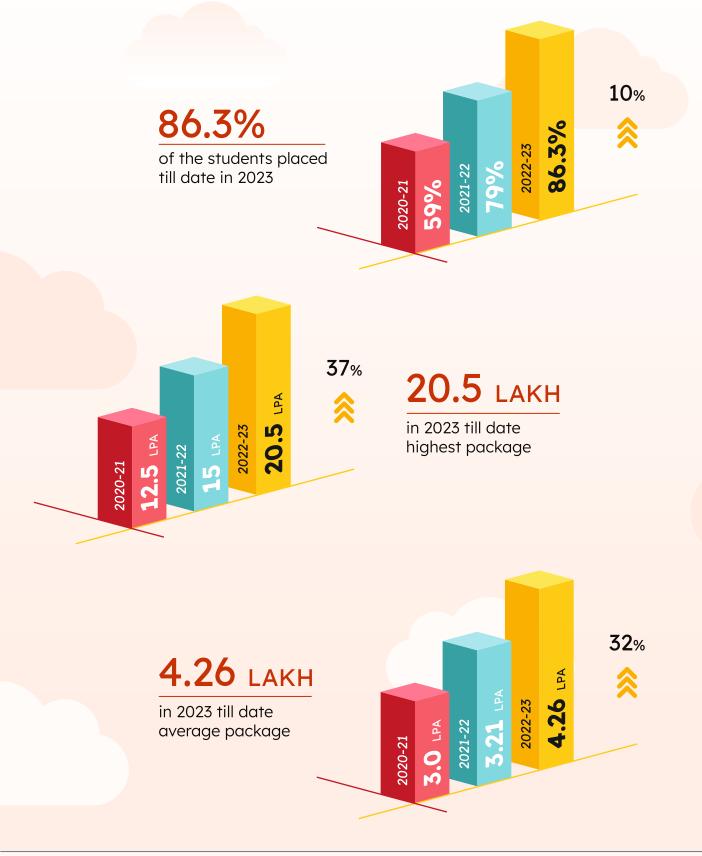
Abhishek Kaushik, "Fingerprint Based voting System" published in International Conference on advancement in Electronics & Communication Engineering (AECE),2023.

A.Kaushik "Study of various wireless technologies: Infrared, Bluetooth, NFC, Wi-Fi & ZigBee" published in Journal Ekansh,2023.

Mr. Abhishek Kaushik - Certificate of Membership: The International Association of Electrical, Electronic & Energy Engineering (IAEEEE).

Mr. Abhishek Kaushik - Certificate of Membership: International Association of Engineers (IAENG).





# STUDENT'S PLACEMENT



🞗 Gr. Noida Phase-II, G.B. Nagar

www.vgi.ac.in

+91 81302 93785

We are proud to announce that our students Aniket, Abhishek Kumar, Umakant, Zameer, Md. Adil Ansari, Shivam Saini, Divya Raj, and Aman Barhela from the B.Tech. CSE, ECE, and Polytechnic EE, CSE Departments have been selected for Sazio Electronics Pvt. Ltd. Their dedication and focused effort came to satiating fruition.

VGI congratulates them on their wonderful accomplishments and wishes them to reach great heights in their promising careers

### CAMPUS PLACEMENT DRIVE

Vishveshwarya Group of Institutions organized a highly successful campus placement drive in collaboration with Tangji Tech Pvt. Ltd. The drive saw active participation from the branches of B.Tech. in Electronics and Communication (EC) and Electrical Engineering (EE). The recruitment drive specifically targeted candidates for the position of Engineer for SMT. Tangji Tech Pvt. Ltd., located in Noida Sector 85, C2, provided an excellent opportunity for students to explore career prospects in a cutting-edge technology domain.

The event not only served as a bridge between academia and industry but also showcased the college's dedication to empowering its students with valuable opportunities for career development.











Vishveshwarya Group of Institutions is buzzing with excitement as it hosts a campus placement drive today, featuring two prominent companies, INDO FARM Equipment Limited. The event has drawn a diverse pool of talented participants, including students pursuing various disciplines such as B.Tech (ME), Diploma holders in Mechanical Engineering (ME), Electronics and Communication (EC), Electrical Engineering (EE), and B.Sc. Agriculture. This dynamic mix of talent showcases the college's commitment to fostering a wide range of skills and interests.

With over 50 enthusiastic students eagerly participating in this placement drive, the atmosphere is filled with anticipation and ambition. It's a testament to the college's dedication to preparing its students for real-world opportunities and connecting them with leading companies in their respective fields.





#### SOME OF OUR OEM's

Whirlpool	🕒 LG		HITACHI
JBL	Haier	VOLTAS	SONY
ΤΛΤΛ	Godrej	SAMSUNG	and many more

# Avards and Achievements

















### INDUSTRIAL VISIT ATTENDED BY STUDENT'S

Vishveshwarya Group of Institutions organized an industrial visit for B.Tech+ Employability students to Cumint Private Limited in Sector 63, Noida.During their time at Cumint Private Limited, students experienced firsthand the intricacies of full-stack development, learning about infrastructure, technologies, and methodologies. Special thanks to our COO, Dr. Poornima Sharma, Dean Academics, Prof. Amit Kumar Agarwal, Placement Officer, Mr. Nitin Gaur, and Coordinator, Mr. Akshat.

The vision of VGI is to prepare students for modern challenges and future industries, fostering creativity and adaptability in a rapidly evolving landscape.



The National Career Service (NCS) announced its transformative initiative, led by the Ministry of Labour and Employment, Government of India. Launched by Prime Minister Sh. Narendra Modi in July 2015, NCS operates as a digital employment exchange, offering a wide array of career and employment-related services at your fingertips. VGI recently signed an MoU with NSC, and certifications provided by renowned organizations like Microsoft and TCS will enhance students' skill sets and employability.

We are proud to share the success story of the recent visit by Vishveshwarya Group of Institutions Girls to NICS. During their visit, they acquired valuable insights into skill development strategies and explored career-focused streams such as Microsoft and Java. Leveraging the resources available on the NICS platform, they made informed decisions regarding their career paths, contributing to their overall career development.



## **Events**

Institute Innovation Council of VGI joyfully celebrated Geeta Jayanti on December 22, 2023. The event was graced by Dean Academics Dr. Amit Agrawal, Dr. Ajay Varshney, Dr. Prachi Tripathi, and faculty members from various departments.

The students' presentations were not merely showcases of knowledge but vibrant expressions of their profound understanding of the Bhagavad Gita. Their articulate insights and interpretations captivated the audience, fostering an atmosphere of enlightenment.

The event resonated with the teachings of the Bhagavad Gita, served as a platform for the exchange of ideas, fostering unity and intellectual growth within the VGI community.



PRARAMBH-2023, the Freshers Party at Vishveshwarya Group of Institutions, unfolded on January 2nd, 2024, with a warm embrace extended to the B.Tech first-year students. The event showcased a dazzling array of talents, featuring dance, singing, and a spirited ramp walk, filling the auditorium with applause and cheers that echoed the vibrant spirit of our budding engineers. The grand presence of the Honorable Chairman, Mr. Sunil Jindal Ji, COO, Dr. Poornima Sharma, Dean Academics, Dr. Amit Agarwal, Academic Heads, and Faculty members added prestige to the occasion. The Distinguished Judges, Principal VIET, Dr. Kirti Upadhyay, and Principal VIP, Prof. Avdhesh Tyagi, lent their time and expertise, contributing to the excitement of the event.

The Mr. and Ms. Fresher Competition stole the spotlight, with students showcasing zeal and vigor, creating a memorable culmination to PRARAMBH-2023. Heartfelt appreciation to B.Tech 2nd Year faculty, student volunteers, and special thanks to the Admin, IT Team, and Media Team for ensuring the event's flawless organization and success









# EDITORIAL TEAM



**Dr. Prachi Tripathi** Head of the Department



Mr. Abhishek Kaushik Asst. Professor