Strategic Plan (2018-23)

AN AGENDA FOR EXCELLENCE

About the University

Declared as Deemed University U/S 3 of the UGC Act, 1956 vide Notification F.9-48/2007-U.3 (A) dated August 14, 2008, Graphic Era (deemed to be University) University (GEU), formerly Graphic Era Institute of Technology is reckoned for its academic excellence in engineering, computer applications, management and allied sciences. The University offers a vibrant academic ambience that aids in unleashing the hidden talent of the students.

The university is nestled amidst the beautiful and serene surroundings of Raja Ji National Park, Dehradun and offers an environment that fosters learning and stimulates creativity. GEU is an institution that believes in igniting minds, making independent and learned intellectuals. The institute has emerged as an institution that has groomed engineers and managers with personal integrity, social responsibility and with the knowledge, skills and creativity to manage nation's enterprise competently and confidently. The institute offers a vibrant cultural ambience that aids in unleashing the hidden talent of the students through overall development and grooming.

The Strategic Development plan sets out a framework of priorities for HEI and has been prepared with the vision and mission of the HEI in view. It has emerged out of a series of discussions amongst various stakeholder groups, including the Industry, with a focus on imparting employable technical and soft skills and aimed at grooming the students to succeed in a competitive global workplace.

Strategic plan (2018-2023) has been finalized after a detailed process of consultation at various levels. It has emerged from the Departments in there faculty Development board meetings that also involved inputs from the students who proved an important resource specially to share best practices of other institutions as learnt from their peers. Detailed interactions with officers of the University, Head of the Departments, senior faculty, Training and Placement wing, and Industry followed. It was frozen after detailed discussions in Academic Council and Board of Management. This participatory consultation process has ensured the inclusion of ideas and expectations of various stakeholder groups making it an inclusive document.

VISION AND MISSION OF THE UNIVERSITY- CORE VALUES

The Vision and Mission statements of the University reflect its resolve to achieve its goals, which are aligned with a value based approach and to enhance the learning experiences, to nurture talent and caliber to empower youth with education that is compatible with current
and futuristic technological needs of the industry. The University remains committed to acting as a catalyst in shaping a bright and sustainable future of the nation and the world. Continuous learning & improvement, Ethics, Simplicity and Integrity and trust comprise the core values of Graphic Era.

Vision

We visualize GEU as an internationally recognized, enquiry driven, ethically engaged diverse community, whose members work collaboratively for positive transformation in the world through leadership in teaching, research and social action.

Mission

The mission of the university is to promote learning in true spirit and offering knowledge and skills in order to succeed as professionals. The university aims to distinguish itself as a diverse, socially responsible learning community with a high quality scholarship and academic rigor.

The HEI is guided by a set of Core Values and Graduate Attributes as the Guiding Force for the Strategic Plan of the University. These find reflection in the academic and administrative functioning of the University and are as under:

- **Excellence** in teaching, learning and research with a focus on accreditations and rankings etc.
- **Creativity and Innovation** in exploring new ways to add to the existing knowledge through new findings;
- **Student Centric learning** to provide the students real life experience
- **Collaborative and Skill based Learning** through industry collaborations and connects.
- **Entrepreneurship** through emphasis on incubation culture
- **Ethical Conduct** through value system teaching
- **Social Responsibility** through community connects and outreach activities
- **Global Citizenship** through international academic collaborations

The focus in the First strategic plan (2008- 2013) on the growth and expansion in terms of physical and academic infrastructure, student’s enrollment, promotion of research, innovations in delivery of quality education and community outreach etc. has continued in this strategic plan also. Likewise, the priorities of next strategic plan (2013-2018) i.e. a focus on Research, empowering the youth with knowledge and employability skills through forging of effective academia-industry partnerships, Graduation outcomes and outcome based education etc. with an eye on securing accreditations (NAAC and NBA) so as to establish GEU as a brand has also continued in this strategic plan.

With the above in view, the strategic plan of the HEI for 2018-23 has been prepared with following major objectives:
1) Positioning the University as a leading academic institution through a focus on excellence in teaching and research.
2) To forge academic collaborations with international Universities and Industry
3) An increased focus on research and patents culture
4) Promotion of start-up culture through strengthening of Technology Business Incubator and developing a program with a focus on imparting employability and entrepreneurship skills.
5) Keeping in view the importance of NIRF parameters in achieving academic excellence and branding of the institution, this plan targets a NIRF ranking in Engineering category in the 100-150 bracket in 2019; in top 100 by 2020; in top 80 by 2022; and in top 60 by the year 2025.
6) A position in top 100 Universities in NIRF by the year 2020, and in the top 75 by 2024.
7) NAAC (A+) grading in the second cycle of assessment
8) Fostering the unique capabilities of each student for holistic development in both academic and non-academic spheres;
9) To promote students centric learning in collaboration with industry, so that learners can choose their learning trajectories, and their own paths in life according to their talents and interests
10) To promote multi-disciplinarity across the technology, sciences and social sciences for a multidisciplinary world
11) To promote creativity and critical thinking to encourage innovation;
12) To promote ethics, life skills and human values like empathy, democratic spirit, spirit of service, scientific temper, liberty, pluralism, and equality so as to groom youth as a socially responsible global citizen.

CORE STRATEGIES OF THE STRATEGIC PLAN
The plan resolves the University to remain as the leaders in academics. An agenda for academic excellence along with skilling, entrepreneurship and innovation will define its core character. The Strategic Plan seeks to provide best of the academic life aimed at building a workforce of value based, confident and committed global citizenry, capable of utilizing the national resources in a fruitful manner. It commits providing conducive learning environment, resources and latest technology to the youth and the necessary space to nurture their creativity.

PRIORITY AREAS:
Following shall be the priority areas to achieve the objectives of the strategic plan:
1. **Focus on excellence in academics and Interdisciplinary Research:** The HEI aims to grow beyond domain-restricted knowledge generation through research. It proposes use of technology for academic delivery and promotion of research relevant to the emerging needs of the society
2. **Focus on accreditations and rankings:** Having realized that NAAC/NBA accreditations and NIRF rankings are a holistic assessment of academic excellence of an institution, the plan has a focus on addressing all parameters valued by them, including regular revision of the curriculum and introduction of courses with a focus on employability, entrepreneurship skills and national and global concerns; recruitment of diverse faculty with proven research
credentials; award schemes for teaching and research achievements; strengthening of TBI; programs in collaboration with industry like TTL, IBM, Oracle, Bentley, Adobe, Wipro, Salesforce etc; MoUs with many foreign Universities; providing research opportunities to undergraduate students; increased enrollment in Doctoral Programs; Foster interdisciplinary and collaborative research strengthening the patent footprint; strengthening the academic and research infrastructure etc.

3. Improved engagement with various stakeholder groups
Valuing the benefits of engagement with industry and society, the University intends to deepen its engagement with stakeholders in multiple ways.

i. Engagement with Industry: Efforts have been made by the University in the past towards forging University Industry interaction. The University aims to strengthen this engagement further through:

a. Start-Up Opportunities: The University will work with entrepreneurs as also develop programs with a focus on imparting employability and entrepreneurship skills. Promotion of start-up culture through Technology Business Incubator will be an integral part of the strategic plan. It will also lead to promotion of creativity, critical thinking and innovation.

b. Industry-Academia Partnerships: The University will establish linkages with industry including setting up of centers of excellence and float specializations and skill development programmes through these linkages to improve employability of students and to encourage mutually beneficial interactions between the University and its industry counterparts. The HEI appreciates the importance of academic collaborations with international Universities and will make concerted efforts to forge such ties.

ii. Engagement with Public Sector: The University intends to build relationship with government in the areas relevant to the themes of mutual interest including research on issues with societal impact and relevance.

iii. Engagement with Society: In its pursuit to promote ethics and human values like empathy, spirit of service, scientific temper etc. so as to groom the students as socially responsible citizens, the University will strengthen further its linkages with the local community and civil society. Such experiences will lead to building of compassion, and developing of leadership traits and willingness to participate in societal development.

4. Capacity Building: World class faculty is an important requirement of an institute committing itself to academic excellence. It is imperative to allow them autonomy, incentivize their contributions and build their capacity for leadership roles. It shall be achieved by recruiting world-class researchers and teachers, transparent selection procedures, a professional work environment, research labs and faculty development programmes.

5. Student Base: Admitting students with ambitions to excel and concern for future is an important requirement to excel in academics and research. The University is proud of its alumni and would aspire to maintain its quality. With this in view, it will target best quality students who have interest in the areas of study chosen.

6. International footprint: The University aspires to become a preferred destination for overseas students. Unfortunately, owing to its locational disadvantage, the HEI has not been successful to emerge as a base for overseas students and researchers. It plans and resolves to make focused efforts in this regard.

7. Library Resources: The University plans to employ Technology as a key in cataloguing and managing the extensive resources of the library systems and to ensure that its rich
library resources are user-friendly and accessible online round the clock.

8. **World-Class Campus Amenities**: A university must offer latest technology, amenities and services to foster the personal and professional development of the students’ and the faculty. The University is known for the availability of technology, especially Information technology, and the way it is being leveraged to enhance teaching, learning, and research. It plans to provide the best on this front.

9. **Promotion of Research Culture**: Having a realization that research plays an important role to build an enquiry driven community, the University will create desired research infrastructure, and provide requisite work environment to promote research.

10. **Technology**: The University believes that technology is critical to a learning environment. It plans to make available the latest in technology, so that faculty and students are benefited by utilizing the power of emerging technologies.

11. **Capacity Building**: Teaching and Non teaching staff shall be capacitated through Leadership development Programmes to support decision making processes and to promote efficient governance mechanisms.

**THE ACADEMIC PLAN**

Following will be the focus activities of the academic plans to achieve the objectives of the Strategic Plan (2018-23):

A) **Multidimensional Growth**

The diverse scholastic and co-scholastic programs and activities at Graphic Era allow the students to nurture different interests and aspirations as unique individuals, to enjoy their own learning experience and grow in their preferred direction.

Keeping in view ever evolving realms of knowledge and societal needs, the University will stay updated and responsive to these needs. The University has created a distinct niche for itself in the domains of Technical education including management. It is known for offering world class quality in these domains. Having realized that the realm of knowledge and societal needs are ever-evolving and enlarging and to stay attuned and responsive to these needs, the University has envisioned certain new programmes and schools in next 5 years to expand its areas of academic operations. The University feels that these areas are critical to the society and the nation. These programmes and Schools are as below:

i) **Health Sciences**: This school will include programmes in health sciences including Nursing and Para Medical sciences. With preference to students from far flung rural interiors of Uttarakhand, the University will through this school intends to align its academic programmes with the national policy of ‘Health for all’.

ii) **Environmental Sciences**: With a global focus on climate change & sustainability and with the realization that environment degradation related risks are a reminder that this issue needs serious focus; the University proposes to offer UG and PG programmes in Environmental Sciences. These will include realms of sustainable ecosystems which need a cadre of qualified professionals and practitioners. Focus on this thematic area is likely to generate much needed concern and dialogue among diverse stakeholders.
iii) Social Sciences – including Governance and Public Policy and Sustainability: The University considers it important to enrich youth with understanding and skills of governance and policy formulations. It believes that in a democratic set up, it is highly important to train youth in these areas since they are the one who will ultimately pursue a career in public service. Programmes in these domains with desired emphasis on developing an interface between academia and policy making will create much required trained workforce of professionals, so important for the efficient functioning of the democracy.

iv) Skill Enhancement, Incubation & Entrepreneurship Development: The University lays emphasis to enhancing entrepreneurial skills of students in a structured manner through relevant trainings. Being a premier educational institution in the state of Uttarakhand, the University considers it apt to start programmes aimed at innovation and entrepreneurship.

v) Emerging technologies: Technology solutions built around emerging technologies like artificial intelligence (AI), 5G, Internet of Things (IoT), Blockchain and robotics, Augmented and virtual reality, 3D printing, quantum computing etc. offer great opportunities for the Universities to add these to their menu of products and services. The University will monitor the trends in close consultation with employer industry and plans to offer skill certifications, minor specializations and programmes in these emerging areas.

vi) Sciences: Presently, the Departments of Environmental Sciences, Chemistry, Physics and Mathematics provide teaching support to Engineering Programmes. These departments have world class faculty, with a strong research footprint. The possibility of establishing a separate Faculty of Sciences with UG and PG programmes in Environmental Sciences, Chemistry, Physics and Mathematics will also be explored.

vii) Specializations: The University also plans to offer specializations at Undergraduate level in emerging areas/technologies including interdisciplinary specializations like Mechatronics Engineering, Electronics & Computers, Aerospace Engineering and Software Engineering & Management etc. preferably in collaboration with the industry.

Apart from above, Graphic Era also plans to introduce Master courses in emerging areas of Engineering and Sciences. The course curriculum will be structured to cater to the local needs and the requirements of industry.

viii) Industry 4.0 MBA programs: It is planned to start MBA programs in specializations like Big Data Analytics and Artificial Intelligence etc. to prepare MBA graduates for the transition from Industry 3.0 to 4.0.

ix) Agriculture Sciences: In an agrarian and populous country like India, the importance of agriculture, sciences needs no emphasis. The University aspires to start a new faculty of Agricultural Sciences during the currency of this strategic plan.

B) Expansion to address the concerns of access and equity

The University recognizes the need to address the concerns of access and equity while aiming to make country a knowledge superpower by equipping its students with the necessary skills and knowledge. The University is also seized of the limitations imposed by the geographical concerns in Uttarakhand i.e. interior far flung hilly areas, and the
relatively poor socio-economic status of the habitants.

The University will therefore aspire to develop off campuses in the remote areas of Kumaon and Garhwal regions of Uttarakhand to address the issues of access, equity and affordability in the remote far flung hilly areas. It will strive to meet the regulatory requirements so as to be eligible to establish these campuses.

C) Improvement of Academics delivery

GEU has a strong culture in supporting outstanding teaching with effective teaching as a central responsibility of teachers. The University in its pursuit to provide world class education plans to develop pedagogic practices that can be benchmarked with international standards and to address changing rapidly changing industry requirements. The plan will have a focus on establishing effective linkages with the industry to design and deliver the courses and specializations so as to deliver an outcome based practical educational experience to the students. The focus will be on project-based educational experience with emphasis on application of acquired skills. The plan envisages a focus towards student centric learning.

- Student interaction with Industry is planned to receive a fillip through activities like site visits, industrial visits, internships, guest lecturers from industry and subject matter experts, role plays, case study method based teaching etc. Graphic Era strives to try pedagogic models where students have greater time for collaborative activities and teacher interaction.
- The academic delivery systems will ensure that students have the opportunity to engage in curricular and co-curricular project-based learning.
- The University will strengthen the international educational opportunities and experiences.
- Faculty will be capacitated for innovative pedagogic skills through FDPs to support quality teaching-learning practices.
- The concept of Industry mentors leveraging the presence of Alumni at senior positions in the Industry will be developed. It will help students to have a closer experience of the intended profession and the workplace. It is expected that this concept of Industry mentors will have a positive impact on the learner experience.
- Keeping in view the requirement of working professionals to constantly upgrade their skills to meet the rapidly changing global industry scenarios, the University will, subject to permission of regulatory framework, provide multiple entry and exit points throughout the working life cycle of the learner. The university will explore the possibility of allowing the student to re-skill and up-skill themselves multiple times during their working lives.
- Strategic plan envisages starting Management Development programs in blended learning mode for working professionals including Army. Strength the University has in IT will be leveraged for desired accessibility. It will also address the concerns of access, flexibility and affordability.
- Distance education offers great opportunity to the in-service people who want to acquire new skills and improve their qualification. It is a boon for students looking for economically viable options and offers a solution to the challenge of improving
Gross Enrolment Ratio. Students hard pressed of time due to other engagements can use distance education as an option and pursue higher studies. It provides the flexibility of studying whenever, wherever, and whatever. The University is well known for the strength of its IT platforms, an important tool to promote distance education, and therefore intends to start a Directorate of online and Distance Education.

- The plan emphasizes a renewed focus on inventing and implementing best practices in teaching through the regular updating of curriculum and making use of new technologies. Curriculum will be designed so as to align itself with local, national and international concerns and focus on employable and entrepreneurial skills. Industry experts will be involved at all levels of curriculum design and content delivery of specialized topics of the industry related domains.
- The University will continue to systematically implement outcome based learning that measure program-specific learning outcomes and competencies, and assesses student learning against intended outcomes and competencies.
- The plan envisages of promoting self learning through online platforms.
- Will ensure teaching excellence through a robust form of assessment that seeks and ploughs in the feedback from all stake holders and peer assessment.
- Introduce industry integrated programmes that create competencies in the students in term of employability.
- MOU with foreign universities for academic exchanges.

D) Promotion of Research
Research is imperative to preserve academic excellence and a distinguished institution of higher education must target a leadership position in research. Graphic Era has always placed a strong emphasis on promoting research. Research, in fact, is visualized as the cornerstone for providing a satisfying academic experience to students, to promote a vibrant environment of inquiry, and encourage partnerships with industry, public sector and other institutions. Graphic Era has over the years experienced remarkable growth in research activity and has emerged as a research-intensive institution. Number of publications and citations etc. bear a testimony to it.

The University has so far published 1200+ number of publications in the SCOPUS, SCI and WOS databases. Qualitative improvement in research is demonstrated by a score of 3400 (WoS) and 4219 (SCOPUS) citations per article. The institute today has an H-index of 30. 35% of the faculty holds a PhD. as compared to just 22 %, 5 years back. The strategic plan envisions increasing substantially the research footprint and development of infrastructure commensurate with the targeted increases in research output. Graphic Era envisions itself to be at the forefront of research activities and a preferred destination for researchers. It also seeks to leverage the industry–academia collaboration to promote applied research and increase substantially the filing of patents.

With the objective above in view, Graphic Era will work towards strengthening the research culture at the University. In this direction, the plan proposes to put in place efficient administrative systems and research infrastructure; support and reward people as they pursue research excellence; and invest in areas of emerging research strength. The plan also visualizes increase in research capacity by recruiting active researchers and
support and mentor existing staff.

The action plan will include:

1. Maintain and enhance efforts to recruit, nurture, and retain a diverse faculty that can provide outstanding support to faculty and students.

2. Development of research infrastructure to support research and support and invest in people and research platforms. Graphic Era will commit to build research capacity, invest in priority areas and support and create research platforms like procuring high-end application instruments to strengthen the existing research facilities.

3. Earmark research budget at app 10 percent with an incremental growth to take it to app 12 percent by the year 2023.

4. Promote industry–academia collaborations and develop partnership with industries and institutes of repute for funding of Research. Graphic Era will dedicate itself to facilitate and encourage research partnerships.

5. Strengthen the public engagement of the university’s research programs with local, national, and international priorities. Develop research focus on local and social issues and attract CSR funding for such focus areas (for e.g. clean water, waste management)

6. To strengthen Technology Business Incubation Centre (TBI) and Science & Technology Entrepreneurs Park (STEP).

7. Incentivise research and patents contribution of faculty and students and to motivate them to undertake joint projects with collaborators from outside the University. Financial and non-financial rewards will be considered for faculty attracting substantial research funding and publishing in high impact journals. Research excellence awards will be instituted.

8. Improve the numbers with a focus on quality of student’s in Ph.D Programmes, provide internal financial support (fellowships etc.) to Ph.D. students and saddle requirements for award of Ph.D. with quality research publications.

9. Establish Centre of Excellence (COE) in various departments in contemporary research themes and creating interdisciplinary research group for promoting interdisciplinary research and intellectual human resource development and create research chairs. A COE will be a shared research facility for undertaking advanced inter-disciplinary research.

10. Identify Research Faculty and facilitate their research contribution through a workload model to enable research active faculty to devote greater time and focus on research. A greater degree of autonomy will also be provided to research faculty to maximise their research output.

E) INFRASTRUCTURE

Even though, for those who love to read and study any place can be good to learn, but transferring this reasoning to the educational systems, appropriate academic infrastructure, including library, research labs and equipments, is decisive to achieve the expected results. As such, investment in physical and academic infrastructure plays an important role to
achieve academic excellence. The University targets a gradual increase in number of students by 2023 to 12000 and will target creation of adequate infrastructure. It will include:

- Modernization of academic and research spaces and to upgrade classrooms (Smart Classrooms) to promote facilitate quality teaching, learning and research.
- Construction of new hostels and staff housing, staff quarters and maintenance and upgradation of old hostels and faculty staff quarters.
- Development of open spaces, community spaces, vistas of green lawn and landscape, following the environment norms and preserving the architectural heritage of the campus.
- High performance computing and networking facilities, industry mentored labs, and centers of excellence will be developed to support research in the emerging areas of computational modeling, simulation, and other computing intensive applications in science and technology.
- An exclusive spacious well stocked and e-resources library will be developed as a world class knowledge center.
- An auditorium of a capacity of app 1000 will be developed to augment the scholastic and co-scholastic experience of students.
- Strategize the reduction of energy consumption by promoting the use of non-conventional energy; deployment of smart environmental controls; encouraging responsible energy use etc.

F) Faculty Recruitment

A University must focus on having a diverse faculty to meet the requirements of and support a diverse student population. Today’s competitive environment of higher education makes retention of quality faculty also a critical issue. Graphic Era has always been committed to hire best of human resources. The current faculty student ratio is 1:20. Even though, it meets regulatory norms, the University has plans to recruit few more as Research faculty.

Graphic Era recruits faculty in a transparent manner with concern only for merit and without discrimination on any grounds. Ph. D., a good academic record, institutional affiliations, and research credentials is a preference. Current faculty recruitment practices include annual Hiring drives, Employee referral, and Competitive remuneration. An effective on the Job orientation programme, mentorship, award schemes for academic and research outputs, liberal grants for Professional development are in place to ensure retention.

Graphic Era acknowledges that faculty shortage is a nationwide phenomenon especially for private institutes. It appreciates that with the recent expansion of public sector in Technical Education, good faculty has many openings in NITs, IIITs, and Central Universities etc. The University is cognizant that in the light of several institutions and Universities having come up recently in the NCR, Graphic Era has a relatively poor location.

The plan resolves to continue with its hiring and retention strategy for faculty with further strengthening of faculty development, reward and incentivisation schemes. It will have a focus on:
a. Improving the quality of faculty with diversity in strategically important academic areas.

b. Strengthen further the faculty friendly policies, transparent appraisal processes, attractive compensation policy, and policies for rewarding outstanding faculty etc. to improve retention.

c. Foster an exciting intellectual environment by providing opportunities for research, dialogue and engagement.

2. ACCREDITATION AND RANKING FRAMEWORK

Accreditations and Rankings have emerged to be an objective and effective tool for assessment of the academic quality of institutions of higher education, and for specific academic programmes.

The NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC), which conducts assessment and accreditation of the ‘Quality Status’ of Higher Educational Institutions (HEI) in terms of its performance related to the educational processes and outcomes, curriculum coverage, teaching-learning processes, faculty, research, infrastructure, learning resources, organization, governance, financial well being and student services have gained worldwide acceptance for its holistic and objective assessment processes.

Likewise, National Board of Accreditations (NBA) assesses the qualitative competence of the AICTE approved programs. Over the period, the NBA has introduced new processes, parameters and criteria for accreditation that are transparent and objective and are in line with the best international practices and oriented to assess the outcomes of the programme.

NIRF framework ranks the institutions across the country on the parameters broadly covering “Teaching, Learning and Resources,” “Research and Professional Practices,” “Graduation Outcomes,” “Outreach and Inclusivity,” and “Perception”.

These accreditation and ranking parameters are thus transparent, objective and holistic and besides stimulating an environment for promotion of the quality of teaching-learning and research, encourage self-evaluation helping thereby the institutions to realize their academic objectives.

The plan therefore proposes to seek these accreditations and rankings with following targets:

a. NAAC grading A++. Presently, the University has a NAAC grading of A with a score of 3.23.

b. NBA Accreditation for B.Tech Programs in Computer, Civil, Mechanical and Electronics and Communication Engineering.

c. NIRF ranking in Engineering category in the top 150 in 2019; in top 100 by 2020; in top 80 by 2022; and in top 60 by the year 2025; and a ranking in Universities category in top 100 by 2020 and top 75 by 2024.

It is observed that there is a significant commonality of parameters for these accreditations and rankings and the University will, through its IQAC cell, focus on continuous improvement and monitoring of these academic and co-academic
parameters. It is expected that plans for academic and research excellence elaborated above will as a natural outcome lead to desired targets. However, renewed focus will be laid on improving patent output, specialized coaching for improving graduation outcomes, structured personality development programmes for better placements, further strengthening of placement cell, funded projects, consultancies etc.

Registrar

Registrar
Graphic Era (Deemed to be University)
Dehradun