



2022-27

Gujarat Technological University STRATEGIC PLAN



GUJARAT TECHNOLOGICAL UNIVERSITY STRATEGIC PLAN 2022-27

| S. No. | Broad Area of Classification | Page. No. |
|--------|---|-----------|
| 1. | GTU at a Glance: <ul style="list-style-type: none"> • About University • Governance, Leadership and Management • Vision, Mission and Core Values • Plan to achieve Missions | 2 - 8 |
| 2. | Academics: <ul style="list-style-type: none"> • No. of Programs • No. of Courses • No. of Faculty Members • No. of Students • No. of Non-Teaching / Administrative Staff | 9 - 14 |
| 3. | Research: <ul style="list-style-type: none"> • Action Plan • Training Programs • No. of Publications & Patents | 15 - 16 |
| 4. | Innovation and Entrepreneurship: <ul style="list-style-type: none"> • Capacity Building/ Outreach Program • Students Sensitized & Student Projects Supported • Start-up PoC Supported • Patent, Trademark & design reg. • Start-ups Supported • Mentors Associated • Start-ups Recognized by DIPP / DPIIT • Incubator Verticals SSIP, Start-up Gujarat, AIC, DIC, IPFC, TBI • Start-up Grants (Cr.) & Employment Generated • Turnover/Revenue by Start-ups (Cr.) | 17 - 18 |
| 5. | Infrastructure: <ul style="list-style-type: none"> • Lekawada Plan – Ecofriendly Green Campus • Sustainable Features of new campus • Action Plan | 19-20 |
| 6. | Internationalization: <ul style="list-style-type: none"> • International Experience Program (IEP) • Foreign Students Cell (FSC) • Collaborations with Foreign Universities • Winter School Program (WSP) | 21-25 |
| 7. | Finance: <ul style="list-style-type: none"> • Grant from Government & Non-Government Sources • Consultancy Income | 25-26 |
| 8. | Strategic Plan to Implement NEP Initiatives <ul style="list-style-type: none"> • Academics • Research & Innovation • Internationalization | 26-27 |

1. GTU at a Glance:

- About the University
- Governance, Leadership and Management
- Vision
- Mission
- Core Values
- Plan to achieve Missions

About The University

Gujarat Technological University (GTU) is an affiliating, teaching and research university located at Ahmedabad to achieve excellence in Science, Engineering, Technology, Management, Pharmacy, and in allied areas. GTU is one of Gujarat's largest public university in terms of the number of the students enrolled in around 378 affiliated colleges. The university enables the students to face the wide ranging changes taking place in the fields of Science, Technology, Environment, Management and Pharmacy. These include innovation, design, development, construction, production, managerial, and entrepreneurial activities. GTU lays great emphasis on assisting students in the developing integrity, self-confidence and leadership by fostering an environment for creativity, imagination, innovation and entrepreneurship. The University offers a wide range of programmes ranging from diploma to doctoral studies in different Faculties of study and also in interdisciplinary areas.

GTU has been recognized under section 2(f) and 12(b) by the University Grants Commission. Presently GTU is situated at a temporary campus at Chandkheda, Ahmedabad however the University has been allocated 100 acre of land near Lekawada, Gandhinagar where the sprawling new permanent campus will be established in near future. The new campus is planned to house the modern facilities with zero discharge, waste water treatment plan, solar energy and many other environmental friendly amenities. GTU has been catering to a number of students and has initiated a number of innovative teaching, learning and certificate programmes over the years.

GTU has been a pioneer in setting up an ecosystem of Start-ups through its various councils and centres and has WIPO-Technology and Innovation Support Centre. The Atal-Incubation Centre has been established at GTU by NITI-Aayog for nurturing viable enterprises and start-up ventures in healthcare, medical devices, biotechnology and allied areas. GTU has recently started its own Multidisciplinary International Research Journal.

During the year 2021, GTU has been ranked 1st in Gujarat and 7th in India in Atal Ranking of Institutions on Innovation Achievements (ARIIA)-2021 amongst all Government Universities (Technical) in India. GTU's Graduate School of Management Studies has received the award under the category of Emerging Institute from the Global Eminence Award-2020, Pune. GTU has also bagged the award for the Most Promising Future Ready University -2021 Award.

GTU through its International Co-Supervisor programme provides a platform for international cooperation where experts from across the leading universities in the world co-supervise our research scholars. GTU has active collaboration with many national and international institutes and has been recognized by various governmental and non-governmental agencies for its work in innovation and technology. At present, the Schools at various GTU campuses caters majorly to engineering, technology, pharmacy, management and applied sciences disciplines. GTU has signed MoUs with many leading universities and research institutions in the country for collaboration and is well-known for its outstanding education, research and innovation. The university has established a strong academia-industry interface. Apart from conventional courses the university also offers various interdisciplinary and industry relevant programmes in Science, Technology, Management and allied areas

The University is committed to attain global standards of excellence in the field of Science, Technology, Management and allied areas by disseminating knowledge through cutting edge research, education and innovation. Best practices are adopted to maintain high standards in the core and allied function through continuous evaluation and improvement of our processes.

The University has around 4 lakh students enrolled under its various diploma, undergraduate, postgraduate and doctoral programmes. The Central Library of the University caters to the academic and research activities. It has a well-equipped conference hall, reading rooms and rich collection of books and journals. There is also an Audio/ Visual studio at the university utilized for recording Ph.D. Viva-voce, events and talks. GTU has a Wi-Fi enabled campus with state of the art IT infrastructure with advance technological facilities. The students have access to high speed internet services at the campus.

The university offers 10 postgraduate, 3 Postgraduate Diploma Programmes and Ph.D. programmes in Faculties of Architecture, Computer Science, Engineering & Technology, Humanities & Sciences, Management and Pharmacy.

The university has introduced various fellowships and in house schemes to promote and support research. The University's doctoral and postdoctoral fellowship scheme has been introduced to support full time students and researchers for pursuing their doctoral and post-doctoral research work. The Seed money scheme, Financial Assistance Scheme for Teachers and Minor Research Projects schemes were introduced by the university to support the newly inducted faculty members for setting up their labs, providing financial support for attending conferences and for pursuing research. The university has introduced Best Ph.D. Thesis award in the year 2022 for recognizing excellence in research.

GTU Innovation and Start-Up Centre (GISC-Section 8 Company) promotes the culture of creativity, innovation, design and entrepreneurship amongst all its stakeholders. Quality research is pursued through its stated code of ethics, ethics committee, well-defined course on research & publication ethics and plagiarism assessment software.

The university has also established a full –fledged centre which continually organizes workshops and seminars on Intellectual Property Rights (IPR) for creating awareness. The centre has a well-established framework and procedure for providing financial and mentoring support for patent filing. Till date 127 patents have been published/awarded to the university. The university has a well-defined policy for supporting consultancy activities.

The university's course curriculum has been developed with a view to integrate advancements in all disciplines, while also incorporating industry relevant technologies. The curriculum is structured in such a manner that the students have a freedom of choosing electives which is nearly the 67% percentage of course that must be obtained for award of degree. A strategy of introducing curricular flexibility is adopted to sustain the interest of all students, both high performers and those with difficulties. Hands on laboratory training on modernized equipment has been expanded. This is an ongoing process and will continue in future too.

The specific branches or the core courses define the stream/branch opted by the student at the time of admission. Students can choose a wide variety of courses from the pool of elective subjects for completing their degree. They can also opt for courses in design engineering. The pool of electives is designed to enhance domain knowledge and skill as well as gives opportunities to the students to explore other interdisciplinary fields.

There is a continuous focus on seamless integration of first-year students entering from diverse backgrounds. Through the university's mentor-mentee programme the students are assisted proactively so that they perform well. The postgraduate programmes offered by the university are tailored to enable customization of job seekers, job providers, researchers and future innovators.

GTU has a strong placement cell and many of our students get placed in very reputed companies like S & P Global, Torrent Pharma, E-Infochip, Zydus, KPMG, Sun Pharma, Deloitte, NTRO, IG etc. GTU has a high focus on industry relevance for its education and research programmes. GTU prepares its students beyond the structured curriculum by encouraging industry interface. Students are encouraged to take up final semester projects in collaboration with industries as industry defined project. GTU is serving the state and nation by producing some of the finest Engineering and Technology professionals.

Establishment:

GTU was established in 2007 and is an affiliating university. Presently, GTU has four schools and one constituent college. As GTU is an affiliating university 378 colleges throughout the state of Gujarat are affiliated with the university.

More than 1000 students are on rolls at different university schools and constituent college.

GTU has 10 PG, Ph.D. and 3 Postgraduate Diploma Programmes. The University has already initiated the postdoctoral fellowship programme and is likely to initiate the D.Sc. and D.Litt. programmes in the Academic Year 23-24.

The University campus has the following Schools and Constituent College

- Graduate School of Engineering and Technology
- Graduate School of Pharmacy
- Graduate School of Management Studies
- School of Applied Sciences and Technology
- Gujarat Power Engineering and Research Institute (Constituent College)

BVM Engineering College, Vallabh Vidya Nagar is the only recognized research centre leading to the award of Ph.D. degrees in Civil, Computer, Electrical, Environmental and Mechanical Engineering.

The University Schools offers various programmes namely ME (Cyber Security), M. Pharm (Regulatory Affairs), ME (Mobile Communication and Network Technology), MBA (International Business), PG Diploma in Digital Marketing, M. Pharm (Pharmaceutical Quality Assurance), MBA (Innovation, Entrepreneurship and Venture Development), M. Pharm (Pharmaceutics), PG Diploma in Data Science, ME (Internet of Things), M. Pharma (Phytopharmacy and Phytomedicine), M.Sc. (Industrial Biotechnology), PG Diploma in Bioinformatics, Integrated M.Sc. Biotechnology and Ph.D.

Governance, Leadership and Management

GTU Act, 2007 provides the following authorities of the university-

- i. Board of Governors
- ii. Finance Committee
- iii. Academic Council and
- iv. Such other bodies as may be declared by the Regulations to be authorities of the University

All these Committees are chaired by the Hon'ble Vice Chancellor, in addition to ex-officio members.

The Academic Council (AC) is the principal body in all the matters related to academic affairs of the University. Apart from external members from academia the Deans of the University are members of the AC. Starting of new academic programmes, changes in the regulation, procedures/ regulations related to examinations, approval of syllabi of different courses, approval of experts for faculty recruitment, framing of the recruitment rules for faculty positions and all other matters related to academic affairs of the university are done by the Academic Council.

In addition to the above, there are other Committees like Research Council, Doctoral Research Committees, Deans and Associate Deans, Faculties in different discipline and Board of Studies etc. in the University for different academic and exam related works.

VISION

To be a global university for the creation and dissemination of knowledge and innovation in Science & Technology, Humanities and Multidisciplinary domains for sustainable development and enrichment of human life.

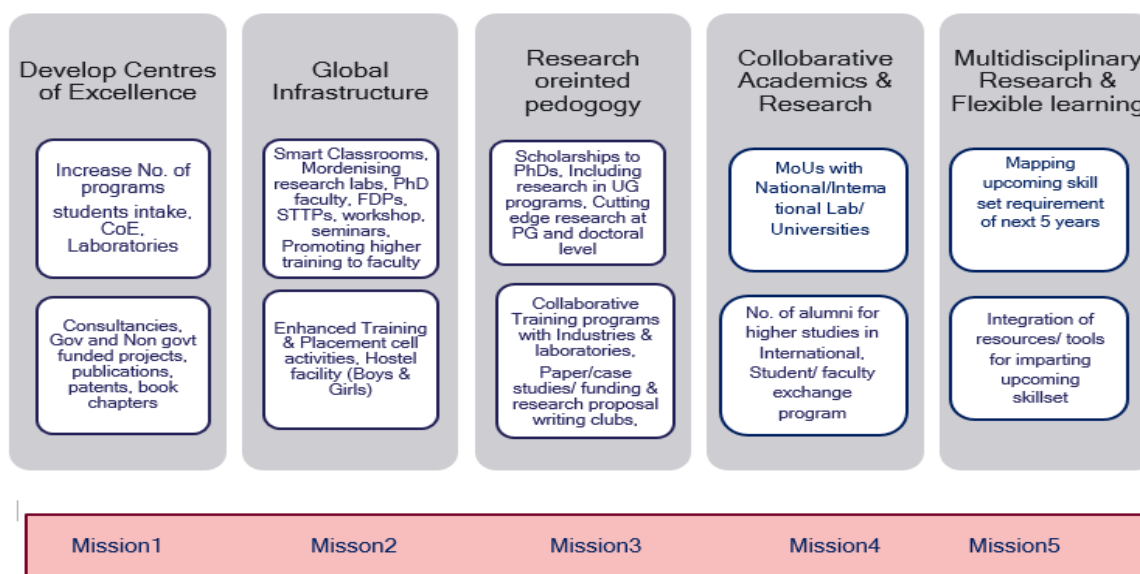
MISSION:

1. To develop centres of academic excellence at university premises and at affiliated colleges in domains of science, engineering, technology, management, and environment for imparting comprehensive education, training, and research infrastructure as per the nation's requirements.
2. To build resources, facilities, proficiencies and other related infrastructure of global standard for the development of knowledge, skills, and competencies in the various educational domains.
3. To develop research-oriented pedagogy for flourishing ideas and to nurture innovators, entrepreneurs and professionals of tomorrow
4. To build and enhance collaborations with other academic, research, industry, and government organizations as well as NGOs across the globe so that education, training and research at university and its affiliated colleges become aligned with national and global level requirements
5. To encourage multidisciplinary research and develop flexible learning ecosystem

CORE VALUES (Objectives):

1. Excellence with value-based education.
2. Responsiveness to society.
3. Integrity and transparency.
4. Mutual Respect.
5. Sustainable development.

Strategic Plan for 5 years- Missions & Actions



Plan to Implement Mission 1: To develop centres of academic excellence at university premises and at affiliated colleges in domains of science, engineering, technology, management, and environment for imparting comprehensive education, training, and research infrastructure as per the nation's requirements.

| Sr. No | Parameter | Planning for next 05 Years | | | | | |
|--------|--------------------------------------|----------------------------|------------|------------|------------|------------|------------|
| | | 2017-18 to 2021-22 | AY-2022-23 | AY-2023-24 | AY-2024-25 | AY-2025-26 | AY-2026-27 |
| 1 | No of Programmes | 15 | 19 | 23 | 27 | 31 | 35 |
| 2 | No of Student Intake | 532 | 1000 | 1500 | 2000 | 2500 | 3000 |
| 3 | No of Academic Centre of Excellence | 3 | 4 | 5 | 6 | 7 | 8 |
| 4 | Research Papers Publications | 216 | 266 | 321 | 381 | 446 | 516 |
| 5 | Book/Book Chapter Publications | 47 | 59 | 74 | 90 | 115 | 155 |
| 6 | Patent Published/Awarded | 127 | 30 | 32 | 35 | 40 | 45 |
| 7 | No of Research Projects (Non- Govt.) | 0 | 2 | 2 | 2 | 2 | 4 |
| 8 | No of Research Projects (Government) | 4 | 5 | 7 | 8 | 9 | 10 |
| 9 | Consultancies | 25 | 30 | 35 | 40 | 45 | 50 |

Plan to Implement Mission 2: To build resources, facilities, proficiencies and other related infrastructure of global standard for the development of knowledge, skills, and competencies in the various educational domains.

| Sr. No | Parameter | Status In | Planning for next 05 Years | | | | | |
|--------|--|------------|----------------------------|------------|------------|------------|------------|--|
| | | AY-2021-22 | AY-2022-23 | AY-2023-24 | AY-2024-25 | AY-2025-26 | AY-2026-27 | |
| 1 | No of Smart Classrooms | 3 | 4 | 4 | 5 | 5 | 6 | |
| 2 | Modernising different laboratories | 5 | 6 | 8 | 10 | 12 | 15 | |
| 3 | No of Faculty with PhD Qualifications | 22 | 27 | 35 | 45 | 57 | 70 | |
| 4 | Improving the qualification of existing faculty members by deputing them for Postdoctoral Fellowships (PDF) / PhD programmes | 10 | 12 | 15 | 20 | 25 | 30 | |
| 5 | Imparting training to faculty members through participation in industrial training, STTPs, FDPs, | 50 | 60 | 80 | 100 | 125 | 150 | |

GUJARAT TECHNOLOGICAL UNIVERSITY STRATEGIC PLAN 2022-27

| | | | | | | | |
|---|--|----|----|----|----|----|-----|
| | workshops, seminars, refresher courses, etc. | | | | | | |
| 6 | Hostel Facilities (Boys) | 1 | 1 | 1 | 1 | 2 | 2 |
| 7 | Hostel Facilities (Girls) | 1 | 1 | 1 | 1 | 2 | 2 |
| 8 | Activities by Training & Placement Cell | 30 | 42 | 58 | 76 | 98 | 123 |

Plan to Implement Mission 3: To develop research-oriented pedagogy for flourishing ideas and to nurture innovators, entrepreneurs and professionals of tomorrow

| Sr. No | Parameter | Status In | Planning for next 05 Years | | | | |
|--------|---|------------|----------------------------|------------|------------|------------|------------|
| | | AY-2021-22 | AY-2022-23 | AY-2023-24 | AY-2024-25 | AY-2025-26 | AY-2026-27 |
| 1 | Providing scholarships for doctoral students | 10 | 20 | 30 | 40 | 40 | 40 |
| 2 | Fostering research at the undergraduate level and enhancing research at postgraduate and doctoral level | 10 | 10 | 20 | 30 | 30 | 40 |
| 3 | Collaborative training programs with industries & laboratories | 5 | 5 | 8 | 10 | 10 | 12 |
| 4 | Development of paper/case studies writing | 1 | 2 | 4 | 4 | 4 | 5 |
| 5 | Periodic project/funding proposal writing workshops | 0 | 1 | 2 | 2 | 2 | 2 |

Plan to Implement Mission 4: To build and enhance collaborations with other academic, research, industry, and government organizations as well as NGOs across the globe so that education, training and research at university and its affiliated colleges become aligned with national and global level requirements.

| Sr. No | Parameter | Status In | Planning for next 05 Years | | | | |
|--------|---|------------|----------------------------|------------|------------|------------|------------|
| | | AY-2021-22 | AY-2022-23 | AY-2023-24 | AY-2024-25 | AY-2025-26 | AY-2026-27 |
| 1 | Collaborative research with National/International Lab/Universities/Industries | 1 | 2 | 4 | 4 | 4 | 4 |
| 2 | MoU with National/International Lab/Universities/Industries for research/ training programs | 4 | 8 | 10 | 12 | 15 | 20 |

| | | | | | | | |
|---|--|---|---|----|----|----|----|
| 3 | No. of alumni for higher studies in International Institutions | 5 | 5 | 10 | 10 | 15 | 20 |
| 4 | Exchange Student / Faculty program | 0 | 2 | 4 | 4 | 4 | 4 |

Plan to Implement Mission 5: To encourage multidisciplinary research and develop flexible learning ecosystem.

| Sr. No | Parameter | Status In | Planning for next 05 Years | | | | |
|--------|---|------------|----------------------------|------------|------------|------------|------------|
| | | AY-2021-22 | AY-2022-23 | AY-2023-24 | AY-2024-25 | AY-2025-26 | AY-2026-27 |
| 1 | No of Skill sets required in next 5 years | 10 | 10 | 10 | 10 | 10 | 10 |
| 2 | Integration of resources/ tools for imparting upcoming skillset | 4 | 5 | 10 | 10 | 12 | 15 |
| 3 | No of facilitators or Industry experts for on demand skill set | 4 | 6 | 8 | 10 | 15 | 20 |
| 4 | No of training modules developed | 4 | 5 | 5 | 5 | 8 | 10 |

2. Academics:

The strategic plan aims to provide a roadmap in line with the vision and mission of the university. This policy document provides direction, dedication and discipline to every stakeholder of the university. The plan focuses on important pillars of the university like education, research, innovation, entrepreneurship, faculty, staff, infrastructure and finance. This plan intends to guide the university leaders in their decision making process and helps them to develop strategies for allocation of resources required for fulfilment of resolutions.

GTU will continue to provide quality education with continuous improvement in teaching pedagogy. GTU believes in imparting best education in the world and will take necessary steps to address the issues. GTU believes in imparting education that is the most effective and powerful tool to empower students. GTU strives hard to groom its students that will prove to be an asset for the nation and society. Students of GTU are taught to contribute to the society with core values of integrity, compassion, commitment, creativity, collaboration and inclusion.

GTU will continue to admit students through transparency and competitive system of examination. The university encourages diversity, gender equality and inclusion through various policies. GTU strives to provide world class teaching and learning environment with focus on research, innovation and entrepreneurship.

GTU will develop extension and outreach policies to promote and encourage students. Students will be encouraged to enhance communication, collaboration, cooperation and coordination.

To keep pace with the fast changing world and provide technologically enabled environment GTU will develop technologically enabled learning environment to encourage and inspire faculty, students and staff of the university. GTU will enhance choices in curriculum to nurture creativity and experimentation for the students. GTU will work towards enhancing flexible curriculum and promote online education. GTU aims at providing exposure to students by increasing industrial visits and study tours as well as student exchanges.

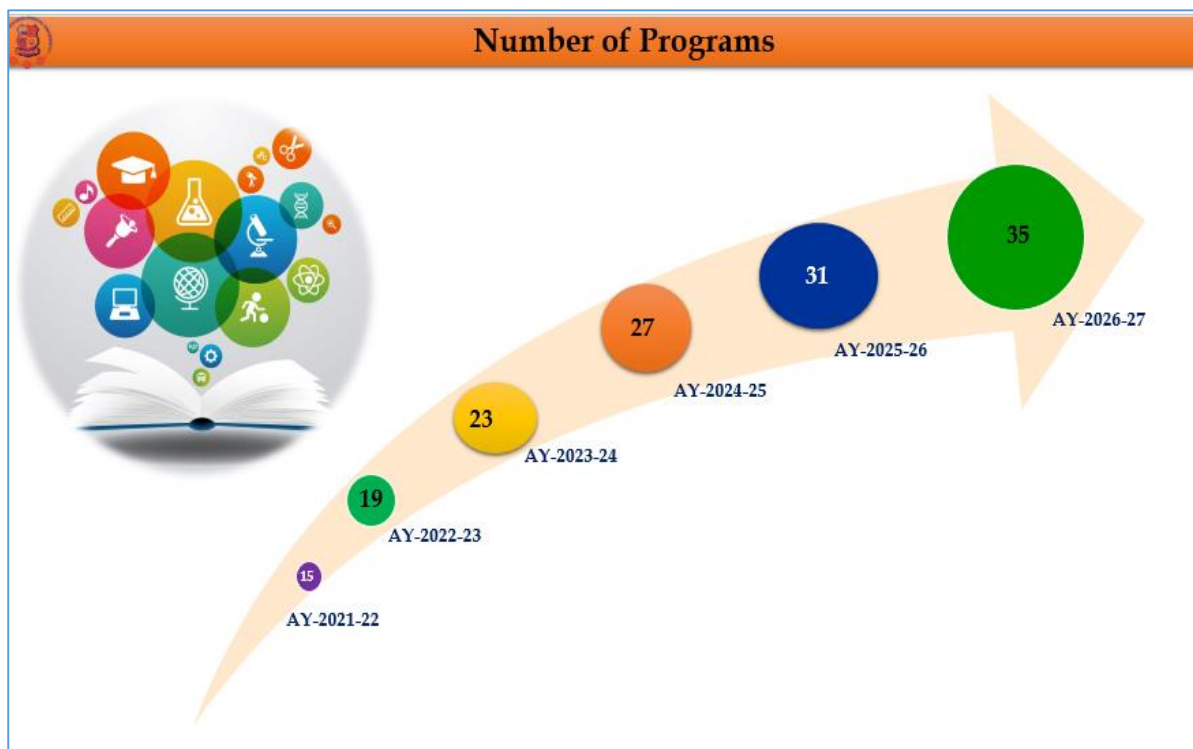
GTU will further strengthen research at the university by introducing research intensive programmes and will work towards collaborating with industries to promote research and innovative culture at the university. GTU will continue promoting online education and will facilitate its students to learn beyond the classrooms as part of their curriculum.

ACTIONS

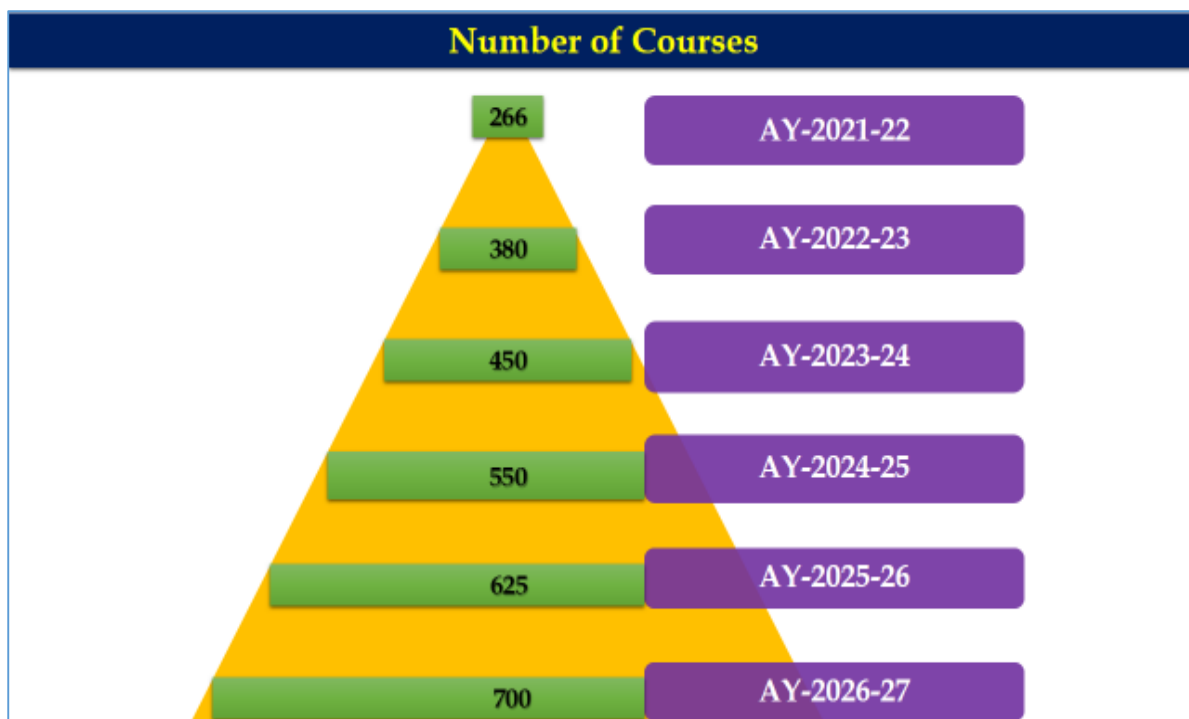
GTU aims at:

1. To increase the student strength at its campus from 532 to 3000 by 2027. To gradually increase the Ph.D. and postgraduate students to 25-30% percent of its total students' strength.
2. To increase undergraduate programmes to 5 by 2027 in important areas of Architecture, Medical Engineering, Sustainable development, cyber security, networking, IoT, AI, Advanced Communication Systems.
3. To increase postgraduate programmes from 10 to 16 by 2027 in important areas of Physics, Chemistry, Mathematics, Economics, Management, Biotechnology, Design, Artificial Intelligence, Mathematics and Computing, Psychology, Sustainable Development, Energy Systems, Advanced Communication Systems, Internet of Things, Flexible Electronics,
4. To increase the students strength in existing postgraduate programmes.
5. To increase the University's Ph.D. fellowship scheme from 10 to 100 by 2027. Efforts would be put in to admit more number of Ph.D. students with fellowships funded by external agencies (CSIR, UGC, DST –Inspire), sponsored projects and industry/alumni funded fellowships.
6. To increase university student internships to 700 by 2027 to facilitate outreach and extension activities.
7. To develop 10% courses for MOOCS platforms by 2027.
8. To encourage students to take courses on MOOCS platform
9. To adopt a flexible curriculum leading to major and minor specializations by 2027
10. To increase the outreach extension activities to 10 by developing laboratories and classrooms for imparting education to the students of nearby areas by 2027.

- **No. of Programs**



- **No. of Courses**



Faculty and Staff Members:

GTU continuously strives for quality faculty and staff. In order to become a world renowned institution it is impressed upon to attract high qualified and talented professionals and provide them with an enabling environment to help them learn and grow. The university policies and framework are designed and developed to support and provide a wide range of opportunities to faculty and staff for professional and personal development.

The university will bring in policies to attract and retain best minds to enrich education, research and innovation. GTU will continue to recruit and retain the very best minds to ensure global competitiveness. GTU will ensure the wellbeing of all its staff members and will continue towards imparting personal and professional development.

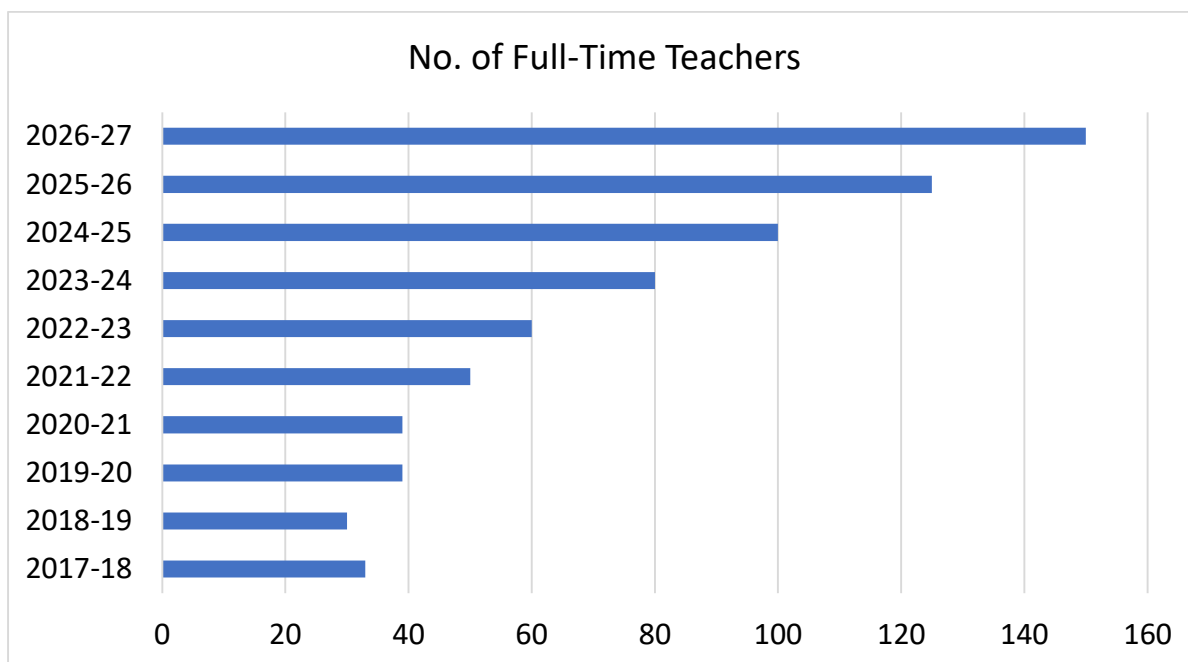
GTU constantly encourages its faculty and staff members to develop professionally and constantly encourages them to participate in conferences, workshops and seminar. GTU supports the faculties in their early careers by incentivizing them with seed money. GTU supports its faculties and staff to learn and adopt to the new and changing technologies.

ACTIONS

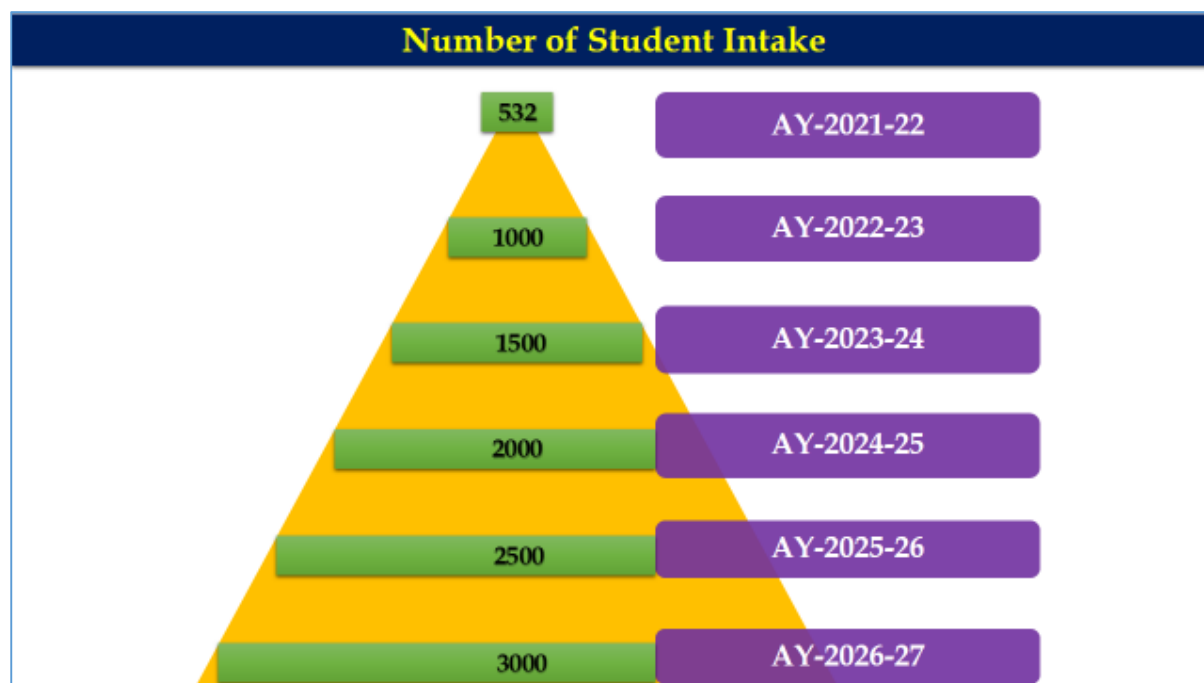
1. To enhance Faculty members upto 150 and staff upto 350 by 2027
2. To increase the budget by 10% to support research projects of faculties and for initiating other developmental programmes.
3. To engage upto 3-5% international faculty
4. To send 5% of the faculty of postdoctoral fellowships in leading research institutions of the world by 2027
5. To send 5% of the faculty for industrial training every year by 2027.
6. To send 5% of the staff for training, skill development and higher education.

- **Number of full-time teachers year-wise**

| Academic Year | No. of Full Time Teachers |
|---------------|---------------------------|
| 2017-18 | 33 |
| 2018-19 | 30 |
| 2019-20 | 39 |
| 2020-21 | 39 |
| 2021-22 | 50 |
| 2022-23 | 60 |
| 2023-24 | 80 |
| 2024-25 | 100 |
| 2025-26 | 125 |
| 2026-27 | 150 |

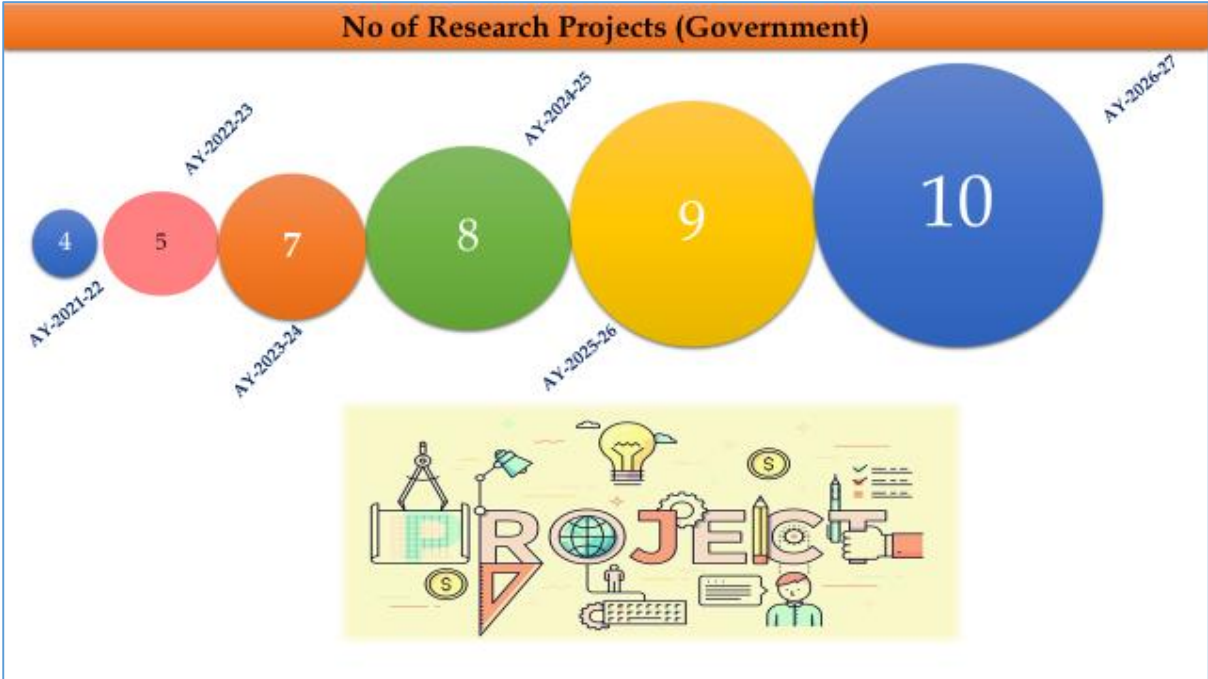


- No. of Students**

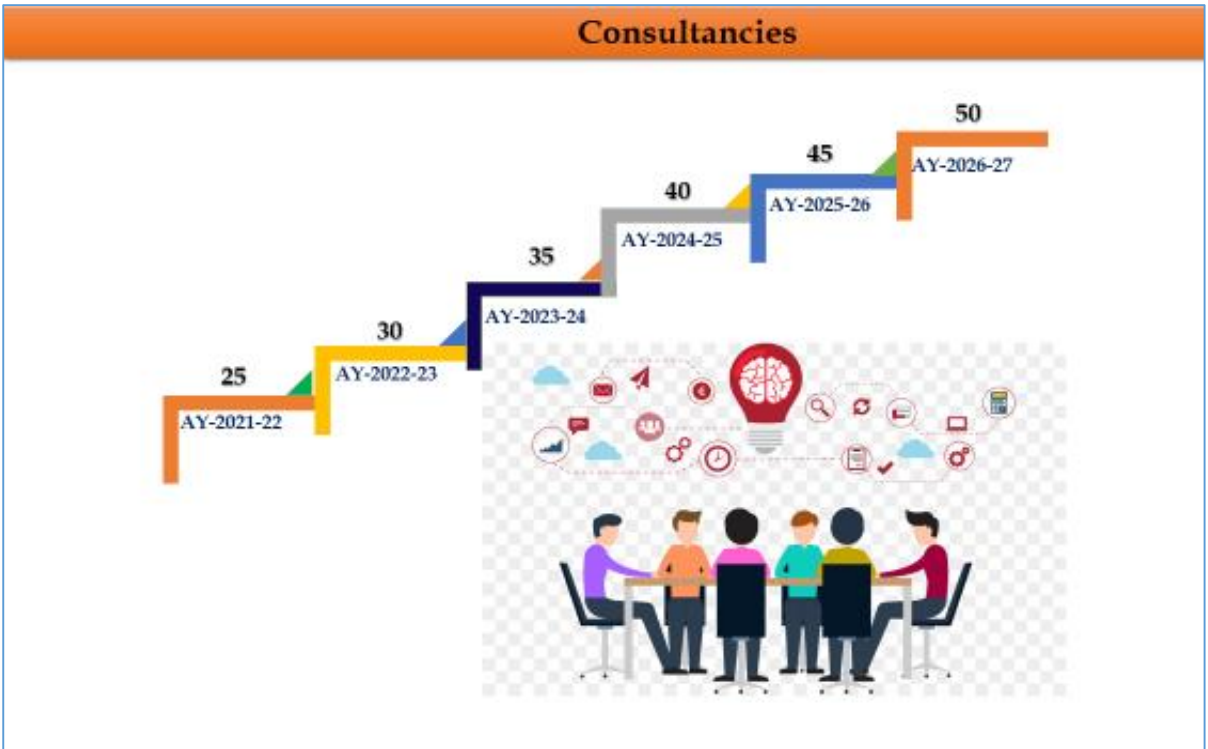


- No. of Non-Teaching / Administrative Staff:** From 260 to 350 in next five years

- No. of Research Projects:**



- No. of Consultancies**



3. Research:

GTU will focus on conducting research in the emerging areas of technology, science, pharmacy, management and other related and/or interdisciplinary areas. GTU will create centres of excellence in such areas/ field of research that will have a large impact on the society. GTU will focus on increasing publications and filing patents; and would promote research by attracting best minds.

GTU's centres of excellence will create research culture and promote research in emerging areas. These centres for excellence will promote future technologies and scientific advancements. GTU would work towards enabling its laboratories with the state of art research infrastructure, facilities and support. More avenues for funding from government agencies, industries, alumni etc. will be explored.

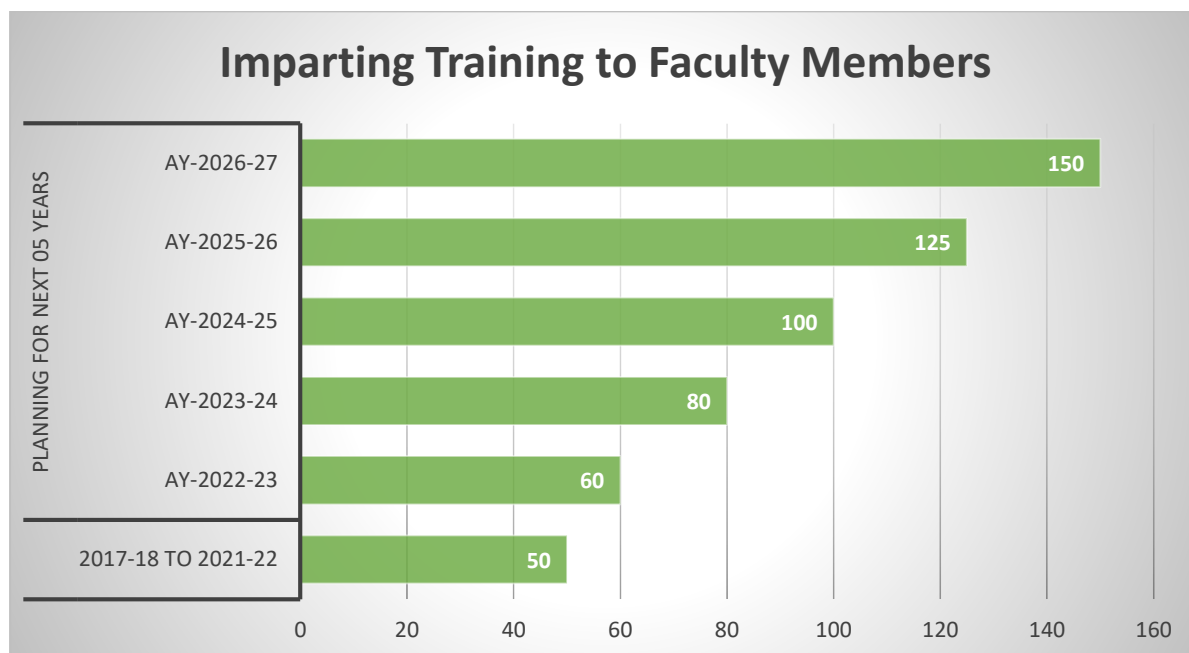
In order to promote excellence in research, GTU will endeavour to recruit more faculty members with PhD degrees at Assistant Professor Level. This will inculcate the virtues of research based teaching and learning in the young faculty members and will give good results in terms of publications, patents and projects and government grants in the long term. GTU also plans to increase the number of full time doctoral scholars at each of its PG schools. These full time doctoral students will assist faculty members in various research based projects and carry out his/ her own research agenda simultaneously. GTU also plans to undertake interdisciplinary research across the four PG schools in the domains of technology, science, pharmacy and management. Such successful interdisciplinary research work will greatly enhance the reputation of GTU as a research based university.

ACTIONS

GTU aims:

1. To establish 8 new centres of excellence by 2027 in emerging areas of sustainable development, clean energy technologies, artificial intelligence, machine learning, cyber security, bio-informatics, Internet of Things, Medical Engineering, Advanced Analytics and Biotechnology.
2. To provide seed money to each faculty for establishing laboratories by 2027
3. To provide financial assistance to each faculty for initiating research projects
4. To award 1000 Ph.D. degrees to research scholars by 2027
5. To produce 10 intellectual properties every year and 500 publications every year in reputed research journals by 2027.
6. To achieve an h Index of GTU "150" by 2027
7. To produce at least 25 commercially sustainable products by 2027.
8. To invest 25% of the revenue on research (including human resource, equipment, library, ICT and physical infrastructure) every year by 2027.
9. To establish 10 research laboratories funded from external agencies by 2027.
10. To have 60 sponsored research projects funded from external agencies by 2027.
11. To have 100 active Memorandum of Understanding (MoUs) with International and National Institutions and organizations

- **Training Programs**



- **No. of Publications**



4. Innovation and Entrepreneurship

GTU promotes Innovation and Entrepreneurship through policies and regulations. Innovation and Entrepreneurship are essential ingredients of academic and research at GTU. GTU is a pioneer in helping students with innovations, creation and transfer of knowledge since its very inception. GTU already has a student support start-up System and Co-creation centre. The Design Innovation Centre, Atal Incubation Centre and Technology Business Incubator established at the university are meant for promoting science, research and innovative ideas. The university's incubation centre inspires students towards taking entrepreneurial path. GTU encourages students and faculties to take up innovative projects.

GTU curriculum imparts flexibility to take up innovative projects. GTU encourages students to take up challenging and innovative projects in association with industries.

By 2027, GTU would like to establish a Technology Park in addition to the Technology Business Incubator. These entities would provide numerous opportunities for students, researchers, innovators and faculty members to experiment with newer ideas and technologies.

GTU encourages and provides a positive environment to have consultancy and sponsored projects. GTU also plans to implement following programmes to boost innovation and entrepreneurship among the students of GTU:

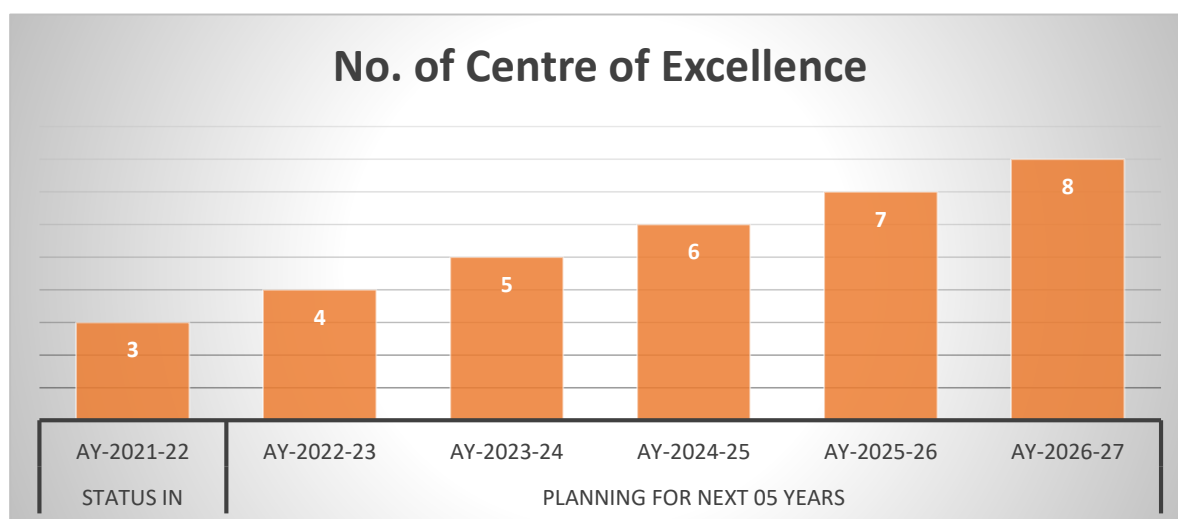
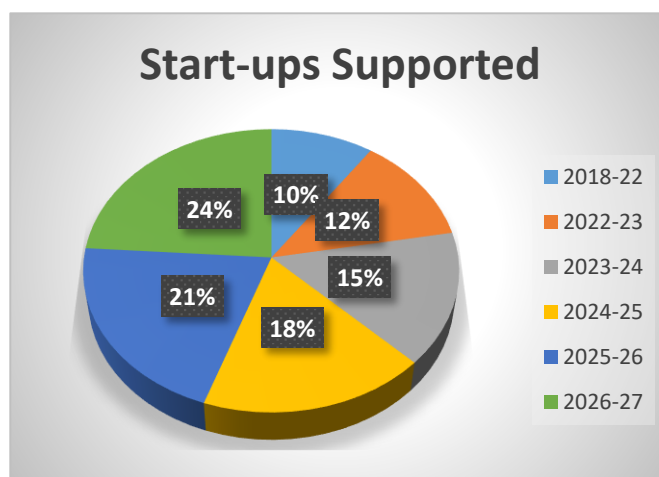
- Incubation Exposure Programme through which there will be exchange of incubates with other incubators. This will open up more avenues for the incubate and the start-up idea will be looked upon from different perspectives.
- Accelerator Programme focussing on 'hands on training' to learn specific technical as well as non-technical skills for incubates.
- Tie up with 'Toronto Business Development Centre' for Startup's Product Development for international markets.
- Formation of Start-up CSR Fund to attract company's to share their CSR fund with GTU's incubates.
- Establishment of Centre of Excellence in Technology Development and Readiness for start-ups.
- Participation in State and Central government schemes for the development of innovation and entrepreneurial activities at GTU.

ACTIONS

GTU aims:

1. To increase the start-up companies in Technology Business Incubator
2. To establish Technology Park of 50 companies by 2027
3. To increase consultancy income generated by faculty to INR 3 crores per year by 2027
4. To have 15 companies from Incubator by 2027
5. To invest upto INR 6 crores in innovative projects

| Innovation and Entrepreneurship Statistics (Plan for next 5 Years) | | | | | | | |
|--|---|---------|---------|---------|---------|---------|---------|
| Sr. no | Particular | 2018-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 |
| 1 | Capacity Building/ Outreach Program | 463 | 650 | 950 | 1150 | 1300 | 1400 |
| 2 | Students Sensitised | 98254 | 98554 | 98854 | 99154 | 99454 | 100000 |
| 3 | Student Projects Supported | 3466 | 3591 | 3716 | 3841 | 3966 | 5000 |
| 4 | Start-up PoC Supported | 599 | 700 | 800 | 900 | 1000 | 1200 |
| 5 | Patent, Trademark & design reg. | 140 | 190 | 240 | 290 | 340 | 350 |
| 6 | Start-ups Supported | 526 | 676 | 826 | 976 | 1126 | 1300 |
| 7 | Mentors Associated | 251 | 276 | 301 | 326 | 351 | 500 |
| 8 | Start-ups Recognised by DIPP / DPIIT | 90 | 105 | 125 | 150 | 178 | 200 |
| 9 | Incubator Verticals SSIP, Start-up Gujarat, AIC, DIC, IPFC, TBI | 6 | 7 | 9 | 11 | 11 | 12 |
| 10 | Start-up Grants (Cr.) | 15.72 | 20 | 22 | 25 | 27 | 30 |
| 11 | Employment Generated | 3000 | 3200 | 3500 | 3700 | 4000 | 5000 |
| 12 | Turnover/Revenue by Start-ups (Cr.) | 34 | 37 | 40 | 42 | 44 | 50 |



5. Infrastructure

GTU has a 100 acre (404686 sq. mt.) upcoming campus at Lekawada, Gandhinagar which has been aesthetically designed with state of the art facilities. GTU will continue to improve and maintain the infrastructure; and provides an encouraging environment for teaching and learning. The upcoming GTU campus will be Wi-Fi enabled and will provide excellent ICT facilities.

GTU looks forward to provide best infrastructure facilities to host world class environment for enabling education, research and innovation. GTU looks forward to have infrastructure that impacts the environment minimally. Infrastructure facilities will be developed on the campus according to the requirement that will arise from time to time.

At the new campus the Library facilities will be enhanced and will have a rich collection of printed books, e-book and journals satisfying the needs to the students, faculty and staff. GTU will continue to enhance the library resources and infrastructure at the university.

GTU is providing latest state of the art computing facilities with sufficient bandwidth and uninterrupted connectivity. GTU is looking forward to have virtual lecture facility. GTU is working towards to have more national and international faculties joining as adjunct faculty / co-supervisors and help groom our students.

GTU will develop a studio with all modern facilities for recording video lectures and sharing it with the students of all affiliated colleges. GTU will enrich the content sharing and collaboration in research and developmental activities in house and through National Knowledge Network (NKN) and would share & access the knowledge through these.





Sustainable Features of new campus:

- The buildings of the new campus are planned in North-South facing to use the maximum natural sunlight.
- The planning of whole campus is made in such a way that 84% area are remained open and 16% area are used as construction work.
- Solar power generation system, LED type fixtures, sensor system, astronomic timer are used to reduce the consumption of non-renewable resources.
- Zero water discharge and 100% water is reused as non-potable.
- Adequate percolating wells are constructed & more than 60% of ground water will be recharged.
- Under the Green Mobility, cycles and shuttles networks are planned.
- The project is planned to obtain minimum 4-star rating of GRIHA / IGBC certification.

ACTIONS

GTU aims:

1. To complete the construction of Lekawada Campus by 2027
2. To invest in IT infrastructure to INR 2 crores every year by 2027
3. To provide 100% ICT enabled services by 2027.
4. To invest INR 10 crores every year for library resources including electronic database and digital books by 2027
5. To construct 60 ICT enabled classrooms by 2027.
6. To develop eco-friendly mode of transport for benefitting the environment and strengthening the Green Campus Mission of the University
7. To construct a 30 bed health centre by 2027
8. To construct a shopping complex in University premises.

6. Internationalization:

Department of International Relations (DIR) was established to manage, expand, and enhance international relations and activities at the University.

In the current scenario where the world is becoming boundary less in terms of business setups, socio-cultural environment, gathering and disseminating knowledge, it becomes crucial to provide appropriate global exposure to the students and faculties of any university.

The activities of DIR have been initiated from the year 2011 and were managed by different cells and officials. However, to bring uniformity and have a central monitoring system in all relevant activities, DIR was established under Rule 6 i.e. Additional Authorities of the University under GTU regulation 2017. DIR is the apex body at the university to look after all activities pertaining to the Internationalization of Higher Education under one umbrella.

Since the inception of GTU, the leadership has visualized internationalization as one of the important approaches of the university. Being a technological university where the programs are in fields of technology and professional domains, it becomes very important that the students and faculties develop a global orientation starting with the contents of the course, pedagogical exposure, and socio-cultural experience through the interactions with the foreign students and faculties so as they become globally competitive and enriched with required skills and knowledge.

Another important challenge for any university is to develop the appropriate research capabilities. In the fields of technical education where the faculties and students are required to be updated with the latest technologies and advancements in their respective domains, it would be beneficial if they have a strong connection with reputed institutes and researchers abroad.

DIR aims to address such needs or challenges with help of a variety of activities and initiatives on a continuous basis.

(A) International Experience Program – IEP: GTU arranges the International Experience Program (IEP) since 2011 to provide international academic and socio-cultural exposure to its students, where the students visit the international university partners in the semester gap for 4-6 weeks in the month of June-July and study two subjects of their respective courses.

More than 350 students from various branches of Management, Engineering, and Pharmacy participate in the International Experience program in the US, Canada, and European countries every year. Since its inception, more than 2200 students have derived the benefits of the international pedagogical system in their academic specialization within the cross-cultural environment of the country of visit under the International Experience Program.

IEP is operationalized by signing MoU and Operational Agreement with the Foreign University partners having details of subjects mapped, the minimum number of students, cost, duration, etc.

• **IEP Activities**

- Study of two subjects of final year + SIP if applicable
- Evaluation of subjects studied by foreign/international professors
- Relevant industry visits, projects, and presentations
- Excursion visits to culturally important and popular heritage sites at the country of visit
- Certificate of participation by the Foreign/International University
- Transfer of credits by GTU for the subjects passed at the Foreign/International University

Future Plan for IEP (2023-2027):

| Year | Tentative Students' Count | Tentative Mentors' count | Tentative Region |
|-------------|----------------------------------|---------------------------------|--|
| 2023 | 400 | 5 | North & South America, Europe, East Asia |
| 2024 | 430 | 5 | North & South America, Europe, East Asia |
| 2025 | 450 | 6 | North & South America, Europe, East Asia, Australia |
| 2026 | 470 | 7 | North & South America, Europe, East Asia, Australia, Middle East |
| 2027 | 500 | 7 | North & South America, Europe, East Asia, Australia, Middle East |

(B) Foreign Student Cell - FSC

Foreign Student Cell enrolls international students to University's PG Schools and affiliated institutes under various scholarship schemes of ICCR (Indian Council for Cultural Relations, Government of India) and on self-finance mode.

Currently, about 808 international students are enrolled from more than 52 countries in various courses like Bachelor of Engineering, Master of Engineering, Bachelor of Pharmacy, Master of Pharmacy, Master of Business Administration, Master of Computer Application, and Ph.D.

GTU ensures excellent academic inputs and enriches socio-cultural exposure to its International Students.

Future Plan for Number of Foreign Students Admission (2023-2027):

| Year | Tentative Foreign Students' Count |
|-------------|--|
| 2023 | 150 |
| 2024 | 170 |
| 2025 | 200 |
| 2026 | 220 |
| 2027 | 250 |

(C) Collaborations with Foreign Universities

GTU – Dept. of International Relations is having the collaboration with following universities across the globe.

DIR is having the MoUs with about 24 Foreign Universities with active tenure as of now.

Foreign University Partners – Dept. of International Relations, GTU

| | | | | | |
|------------|--|--|-----------------|---|--|
| USA | Kansas State University |  | Bulgaria | Varna University of Management |  |
| | Laurentian University |  | | University of Architecture, Civil Eng. and Geodesy |  |
| | University of Applied sciences Technology Business & Design |  | | Sofia University |  |

Foreign University Partners – Dept. of International Relations, GTU

| | | | | | |
|---------------------|---|---|---------------|--|---|
| Australia | Universal Business School of Australia |  | Poland | Jan Wyzykowski University |  |
| | Engineering Institute of Technology |  | | The AGH University of Science and Technology, |  |
| | Western Sydney University |  | | Wrocław University of Science and Technology |  |
| South Africa | Regenesys Business School |  | | | |

Foreign University Partners – Dept. of International Relations, GTU

Russia

Ural Federal University



Switzerland

ABMS Open University of Switzerland



Ghana

University of Cape Coast



Malaysia

Limkokwing University of Creative Technology



Lincoln University College



Foreign University Partners – Dept. of International Relations, GTU

Bangladesh

Daffodil International University



Kenya

Mount Kenya University



Nigeria

University of Abuja



Kuwait

Box Hill College



UAE

SKYLINE UNIVERSITY COLLEGE



Taiwan

National Tsing Hua University



Future Plan:

In next 5 years, DIR is planning to increase the Number of Foreign University Partners to 70 with focus of MoUs with universities of reputes across the globe.

(D) Winter School Program – WSP:

WSP is a short-term study program providing learning opportunity to international students of various branches of Engineering, Management & Pharmacy at GTU along with lots of exciting trips and tours to heritage and cultural sites in Gujarat, India.

Intake: January / July / September every year –

Program Highlights

- Classroom Sessions
- Project Work/Fieldwork
- Relevant industry visits
- Excursion visits to Heritage / Tourist sites,
- Cultural programs, Festival celebration
- Interactive meet with Government officials
- A Certificate is provided at the completion of the program

Future Plan for WSP (2023-2027):

| Year | Tentative Students’ Count | Tentative Region |
|-------------|----------------------------------|--|
| 2023 | 15 | Africa, Europe, East Asia, Middle East |
| 2024 | 15 | Africa, Europe, East Asia, Middle East |
| 2025 | 20 | Africa, Europe, East Asia, Middle East |
| 2026 | 20 | Africa, Europe, East Asia, Middle East |
| 2027 | 25 | Africa, Europe, East Asia, Middle East |

7. Finance:

GTU has a financially strong and effective management system of its both income and expenditure. GTU funding mostly comes from Grant in aid from Govt. of Gujarat and University generated funds. Some funds are also generated through consultancy and sponsored projects; and also through contributions made by the alumni. The university will have a 64572 square meters built up area by 2027. We will continue to manage funds and make the University ready and sustainable for the future innovative, research, entrepreneurial and societal activities.

GTU already has an internal audit system will continue to strengthen it. GTU will work towards adhering to the provisions, rules and regulations while implementing every process and develop a transparent system.

One of the major area to broaden the funding base will be to generate revenue through consultancy projects. This will include industry and government projects and income obtained through services provided by Public Testing Laboratory established at GSP and other laboratories of GTU PG schools of Applied Science and Engineering and Technology.

Other avenues of fund raising will be through the donations received from the ever increasing number of alumni of GTU. Also the increase in number of foreign students admitted on self-finance basis at GTU PG schools will increase the fees revenue.

ACTIONS

GTU aims:

1. To get INR 250 crores grant from Govt. of Gujarat for infrastructure development and construction by 2027.
2. To increase the annual recurring expenditure on account of salary to INR 25 crores by 2027.
3. To increase the annual expenditure of the university excluding non-recurring expenditure to INR 100 crores by 2027.
4. To maintain the expenditure ratio i.e. 60% from University Generated Funds and 40% from Grant-in-aid.
5. To increase the contribution from alumni to INR 1 Crore by 2027.

8. Strategic Plan to Implement NEP Initiatives:

GTU proposes the following actionable points classified into (i) Academics, (ii) Research & Innovation and (iii) Internationalisation domain

Academics:

- Exit option after first year in 2 year Post Graduate Programs with a certificate of Post Graduate Diploma
- MOOCs will be introduced in various Programs and Credit will be transferred as per UGC norms. Also more vocational, professional and skill components should be incorporated in the degree programs to attract learners.
- More Programs at UG and PG level to be added to become Multidisciplinary University by enrolling more than 3000 students under the various UG/PG Programs of University
- Develop a holistic multidisciplinary curriculum for various programs based on compulsory (core/ fixed) & optional (elective / flexible) courses including vocational, professional and soft skill courses.
- Design programs with prerequisite for taking a course & also cross listed courses across department/disciplines.
- Development of a mechanism for mutual recognition of credits.
- Formation of Question paper for exams as per Bloom's taxonomy
- Development of alternative methods of assessment
- Decrease of summative assessment component (for example mid-term or end term university exam) in total assessment component. Also increase of formative

assessment component (for example continuous assessment tools for the entire term) in total assessment component.

- Establish “DHAROHAR – Centre for Indian Knowledge System” and launch certificate courses to promote and disseminate knowledge on “Bharatiya Knowledge System”
- NBA accreditation for majority of programs

Research & Innovation:

- Development of ‘Inter University Centre of Excellence’ for maximum utilization of infrastructure for research & development across different sectors
- Develop research oriented curriculum
- Encourage final year students of UG & PG to take up ‘Industry defined problem (IDP)’ as internship assignments (especially local and society relevant problems)
- Collaborate with industry / research agencies / other universities / independent organization (consumer forums/ associations/ NGOs) for identification of research issues
- Collaboration with industry for acting as (1) knowledge partners for imparting vocational training (2) provide apprenticeship/internships to students based on vocational subject courses (3) development of incubation centres for industry sector specific requirements (4) visits by student for (i) exposure to industry (ii) skill requirement (iii) interactions with master craft persons/experts
- Setup of digital library to access high quality research journals /reports / government & other scientific publications / databases.
- Encourage non PhD faculty to enrol for PhD.
- Incentivize & award good quality research of students / faculty.

Internationalization:

- Designing internationally relevant curriculum and teaching pedagogy.
- Digital promotion activities by revamping websites and social media campaigns to attract foreign students.
- Twinning programmes in collaborations with foreign universities.

These actionable points, once implemented will convert GTU into a research based multidisciplinary university.



GUJARAT TECHNOLOGICAL UNIVERSITY

**Nr. Visat Three Roads, Visat – Gandhinagar Highway,
Chandkheda, Ahmedabad – 382424 - Gujarat**

E Mail: info@gtu.ac.in

Website: www.gtu.ac.in