





Goel Institute of Technology & Management, Lucknow

Annual Report 2022-23 Institute Innovation Council

A. About IIC Institute

- GITM Institute Innovation Council is the Emergence of Entrepreneurial Activity at Goel Institute of Technology & Management, Lucknow. It was established in the IIC calendar year 2020-21
- It Nurtures Entrepreneurial Activities and Inventions for Students, Staff and Faculties under the Supervision of alumni, Industry Professionals, Business Leaders and Renowned Academicians. Its Main Aim is to Identify Grass-Root Innovators in Various Engineering Streams by Creating a Healthy Atmosphere of Expressing, Discovering and Developing Skills and Talent.

> Vision

To Promote New Technology, Knowledge and Innovation-Based Start-Ups and Entrepreneurial Ventures for Societal Needs and National Development.

> Mission

- Mentoring students to become young entrepreneurs with the help of regional and international resources for product development.
- Encouraging students to participate in periodic innovative related activity programs, and identify challenges and documentation for their professional success.
- Providing a financial support platform to establish a vibrant start-up ecosystem for various prototypes.

> Journey of IIC established at the Institute

- ✤ 12thJune 2020: Received an invitation from AICTE to join the MHRD NSIP campaign. Our institute joined the NSIP campaign.
- 13thJune, 2020: Dr. Priyanka Jaiswal, nominated as NSIP faculty coordinator from our institute.
- ✤ 25th June 2020: Under the guidelines of NSIP and UP state startup policy, formulation of an innovation council was recommended by the institute Academic council.
- ✤ 15th July, 2020: Nominations of President, Vice President and Convener of institute innovation council.
- 25th July 2020: Nomination of Different Activity Coordinators, Members and Proposal for seeking External Experts members.
- ✤ 30st July 2020: Finalization of all internal IIC members, External IIC members, student members and the Final list is approved by Director of the institution.
- ✤ 10th August 2020: Convener was asked to elaborate Vision, Mission and objectives of IIC.
- ✤ 28thAugust 2020: First Brainstorming meeting of IIC to finalize vision, mission and objectives of innovation cell. President, IIC, approved the vision, mission and objectives of the Innovation Cell. The major Thrust Areas for







activities were also discussed by IIC.

- 22nd September 2020: Second Brainstorming meeting of IIC to finalize shortterm and long-term plan and goals of IIC. President, IIC, approved the shortterm and long-term plan and goals. The activities that must be conducted this calendar year were also discussed.
- ✤ 23stOctober 2020: Third Brainstorming meeting to finalize policy of IIC based on guidelines of MoE, IIC. The policies of IIC were approved by President IIC, GITM and sent to the Chairman of the institution for kind approval.
- > Performance of IIC-GITM for Session 2021-22:
 - NIRF India Ranking-2023 Positioned in the band 51-100 in the Innovation Category
 - Awarded 4 Star rating in IIC-4 Session 2021-22
 - The Number of Activities conducted and verified
 - IIC Driven Activity- 21
 - MIC Driven Activity- 7
 - Self Driven Activity- 49
 - Celebrity Activity- 9
- > Performance of IIC-GITM for Session 2020-21:
 - Awarded 3.5 Star rating in IIC-3 Session 2020-21
 - The Number of Activities conducted by GITM innovation Cell;
 - IIC Driven Activity- 20
 - MIC Driven Activity- 6
 - Self Driven Activity- 18
 - Celebrity Activity- 4

> Objectives:

The objective of the GITM Innovation cell is to create an attractive work environment that nourishes the vibrant research works toward the development of social as well as national issues. It provides a platform for Faculties, Staffs Students of GITM to be part of this cell and come up with Innovative Ideas in the field of waste management, genetic diseases & renewable source of energy fruitful for the development of low-cost equipment used in agriculture as well as industrial sectors.

Long Term objectives:

- 1. To establish an innovation hub with the best pre-incubation facilities in collaboration with government funding agencies and ecosystem enablers.
- 2. To facilitate a good number of technology transfers, technology licensing and commercialization of technologies developed by faculty and students.
- 3. To incubate successful student startups and business ventures.
- 4. To promote resources in innovation and entrepreneurship to improve the Atal Ranking of the institution.
- 5. Associate with DST, MSME and other academic institutions for transferring







world-class facilities for innovation activities.

Short-Term Objectives:

- 1. To help student groups to prototype their ideas.
- 2. To improve innovation, creativity and design thinking among the student community.
- 3. Organize hackathons and boot camps on campus.
- 4. To organize FDP, seminars and workshops, and distinguish talks for students and faculty to promote entrepreneurial culture.

To connect the academic process with innovation and entrepreneurship.

➢ Policies:

- ◆ The policies of GITM Innovation Cell are mentioned below:
- 1. Development of expertise groups based on the thrust area of GITM, Innovation Cell at the institute level.
- 2. All participants (inside/ outside/ alumni of the Institute) get to register at the incubation centers with due permission from the institute for their work.
- 3. Motivational and training programs like seminars/ expert lectures/ workshops/ FDP/ Conferences based on the thrust area should be organized on a timely basis.
- 4. Innovation cell members get free short-term/ six-month/ one-year training programs related to their thrust area.
- 5. To nourish the Innovation cell, faculties/ staff will be facilitated in terms of leaves/ increments for their active participation after monitoring their work. The students will be facilitated by providing good credits in academics.
- 6. Faculties/ staff/ students or registered candidates of innovation cell are free to utilize (without any payment) the resources of the institute for their start-ups.
- 7. The progress of work carried out in the innovation cell will be judged on a monthly basis.
- 8. Mentors from each thrust area should represent the work performance after the completion of one semester (odd/ even).
- 9. The institute may update/ change/ revise performance evaluation policies for faculty/ staff/ students.
- 10. Infrastructure comprises R&D equipment that has been developed at the institute level to encourage innovative thinking and research work. Journal publications on start-ups are highly appreciated.
- 11. Innovation cell always encourages the filing of IPR. The filled IPR is jointly owned by inventors and the institute under the supervision of the IPR decision-making committee of the institute.
- 12. For nourishing the Innovation cell an "Innovation Fund" which is 2% of the total annual budget has been created in the Institute to take care of seed-funding, creation of an incubation center and start-ups.
- 13. Various strategies will be initiated to raise the funds from diverse sources such as private and corporate sectors, alumni network, sponsorships etc.
- 14. Center of excellence should be started after the flourishing of several activities based on an expertise network.







- 15. The Innovation cell also looks into the conversion of start-ups into small industries or MSMEs for their commercial production.
- 16. The GITM Innovation cell takes active participation in the events/activities organized by the government of India based on social work.
- Diversified representation in the IIC established at the institute from industry, Interdisciplinary & Departments/ Units etc.

Number of Interdisciplinary Department Representation: 8 Number of Internal Faculties Representation: 26 Number of Student members Representation: 154 Number of Academicians from other institute Representation as External member: 6 Number of Academicians from Industry Representation as External member: 6

B. Brief mention of key functionaries at the IIC Institute

| President

The president initiates, identifies, forms the council and assigns the role and responsibilities to members in an orderly and efficient way. He/ She communicates with the IIC National Coordination team (MHRD Innovation cell) and takes lead in the institution-driven activity. He/ She ensures effective implementation of IIC activities with the help of the convener.

Vice President

The vice president is a senior expert representative. He/ She strengthens the campus innovation and entrepreneurship activities by providing infrastructure support and facilities within and outside the institute. He/ she also strengthens institutional collaboration with the ecosystem at a different level.

Convener

The convener coordinates with all departments for participation in the meeting with the inputs from all valuable council members and the president. He/ She ensures effective delivery of IIC activities with no interference with academics

Innovation activity coordinator

The innovation activity coordinator organizes and coordinates innovation promotion activities and extends support to other activities.

Start-up activity coordinator

The start-up activity coordinator works to boost start-up-related activities among students as mandated by the IIC council.

Internship Coordinator

The internship activity coordinator organizes and coordinates internship opportunities in start-ups, tinkering labs and incubation centers etc. to promote innovation activities among students.

IPR activity coordinator

The IPR activity coordinator organizes and coordinates IPR mentoring and awareness programs to extend support for innovation and entrepreneurial activities

Social Media Coordinator

The social media coordinator is responsible for social media promotion and public relations about IIC activities. He/ She ensures that all students follow social media to





get first-hand information.

C. Portfolio/Graphical/Tabular representation of Resource strength (Human capital and Physical capital) of the IIC institution

	 Total No. of Institute Innovation Council Member Total No. of Innovation Ambassadors: Total No. of faculty Mentors from Portal: 	200 17 17
•	Pre-Incubation Units:01. New Gen IEDC2. Innovation Cell3. AeroBay Lab	3
•	Incubation Unit:01. Royal Enfield Center of Excellence & Incubation Center2. BOSCH-CSR3. GITM Incubation Center	3
•	IP Facilitation Unit:01. GGI IPR Cell	1
•	IP Facilitation Unit:01. GGI IPR Cell	1

D. Highlight Facilities, Infrastructure of Pre-Incubation & Incubation kind and Student bodies/ clubs engaged in the promotion of Innovation and Entrepreneurship on the campus.

PRE-INCUBATION UNITS

1. NEW GEN IEDC:

The objective of New Gen IEDC (Innovation and Entrepreneurship Development Center) is to improve Innovation, Creative thinking skills of students and thereby develop good social relevant projects and to prototype them and help them to find funding/ incubation from Govt./ Private sources to start a Start-up or help them be good innovators. Our mode of operation is to plan, train and monitor the IEDC activities of students in their department with the help of each faculty mentors which would aid in achieving the mission.

The activities under IEDC activities are student leadership points, IEDC IOT and Robotic lab activity, social innovations, internship in startup, Attended/ participated Exhibitions, project contest ,prototype development, company registration, IPR, Start-up activity etc.

Faculty Coordinator: Dr. Devendra Agarwal (Vice-President, IIC-GITM)

2. INNOVATION CELL

GITM Innovation Cell is envisaged to network people, ideas, experience and resources to motivate the innovation community in the college. This cell helps to nurture the student's innovative ideas and encourage them to translate ideas into reality or bring up business proposals by using the facilities of workshops, laboratories, library including digital library facility, internet and intranet facilities and research facilities available in the institute.







The main aim of this Cell is to provide students a perfect platform for working together as teams and participate in various competitions. It will also serve to provide the students a platform to excel in their specialized area of interest.

Faculty Coordinator: Dr. Priyanka Jaiswal (Convener, IIC-GITM)

3. AeroBay Lab:

Aerobay Lab is a Preincubation Unit of GITM that offers upskilling training in AI, robotics, and design thinking for

students. This Lab is dedicated to advancing the field through rigorous experimentation, simulations and groundbreaking research. This lab provides a platform for students to upgrade themselves in aerospace industry and pushing the boundries



Faculty Coordinator: Mr. Abhinav Shukla (Member, IIC-GITM)

INCUBATION UNITS

1. ROYAL ENFIELD CENTER OF EXCELLENCE & INCUBATION CENTER

"Royal Enfield Center of Excellence & Incubation Center" is established at our campus of Goel Institute of Technology & Management, Lucknow in association with Royal Enfield (A Unit of Eicher Motors Ltd.) on 11th March 2021. The objective of Royal Enfield – Centre of Excellence & Incubation Center is to enrich the knowledge of repair, maintenance and diagnostic techniques and terminology of two-wheeler vehicles in specific with Royal Enfield among the students aspirants.

The incubation unit is equipped with the latest machines and tools to provide startup by Research, skill development, and practical training in the fields of Mechanical, Electrical, and Automobile Engineering. The students undergo different phases of trainings under the experts from Royal Enfield and received certificates. The faculty members are also given time to be part of the training and improve their understanding of all the existing and advanced techniques in the Royal Enfield.

Incharge:

Mr. Gaurav Srivastava, Manager Royal Enfield







Mr. Shiv Kumar Tripathi (Member, IIC-GITM) Mr.Abhay Mishra (Innovation Activity Coordinator)

• Photos:



2. BOSCH CSR

The Nation Building Training (NBT) has been performed of GITM students, in collaboration with BOSCH INDIA FOUNDATION for CSR Industry-Academia Collaboration Initiative. Its objective is to inculcate the importance of ethics and integrity among students like responsibility, accountability, saving and investment etc.

Faculty coordinator: Dr. Richa Verma, Member IIC, GITM









3. GITM INCUBATION CENTER

The GITM INCUBATION CENTER provides a platform of experimental basics for nurturing and overseeing innovation and entrepreneurship among students.

Faculty Coordinator: Dr. S.K Shukla, Member IIC, GITM



IPR FACILITATION UNIT

1. GGI IPR CELL

The GGI IPR Cell has been formed at Goel Group of Institutions (GGI) to provide knowledge by coordinating, conducting and managing activities related to the Intellectual Property Rights in the college and also to create awareness among the stakeholders.

Faculty Coordinator:

Dr. Akash Ved (IPR activity Coordinator, IIC-GITM) Dr. Jyoti Agarwal (IPR activity Coordinator, IIC-GITM)

STUDENT CLUB- GITM INNOVATION CLUB

Objective: To Conduct different Activities under the guidance of IIC related to innovation, startup, IPR & entrepreneurship and promote them on College Facebook, Twitter and Instagram

Faculty Coordinators: Internal Members of IIC, GITM Student Coordinators: Student members of IIC, GITM







External Members of IIC, GITM

INNOVATION & ENTREPRENEURSHIP COLLOBRATION =22

- Corporate/Industry Association: 13
- International Agency: 2
- Knowledge/Mentoring agency: 6
- Government Agency (Central): 1
- E. Highlight Achievements (Narrative/Graphical/tabular representation)
- NIRF India Ranking-2023 Positioned in the band 51-100 in the Innovation Category
- Awarded 4 Star rating in IIC-4 Session 2021-22

• List of Successful entrepreneurs of Institute:

S. No.	Name of Student	Details of Entrepreneurial work
1.	Om Verma & Md. Abid Khan	Partial Replacement of Concrete with Glass fibre
2.	Satyam Kushwaha	Sand Sieving Machine
3.	Anand Shekhar	Use of Waste Plastic as Brick Manufacturing
4.	Mr. Vikas Tiwari	DIZITAL DREAMS
5.	Er. Arvind Raja (Founder and CEO)	TULA-SOLAR POWER (Building Your Trust in Solar)
6.	Praval Kumar	Enfusion Power (An Innovation Solution for Renewable Energies)
7.	Rishi Kashyap	Drone Tech Innovations: An Alternative for highly secure drones

 Number and Different types of I&E and IPR activities Conducted in IIC-5 Session 2022-23

Quarter	IIC	MIC	Self –	Celebratory	Total
			Driven	_	Activities
1	7	1	12	2	22
2	8	2	17	3	30
3	7	3	18	3	31
4	8	4	12	3	27
Total	30	10	59	11	110

- Number of Different Innovation & Entrepreneurship related Academics and Non Academics Courses Conducted in IIC-5 Session2022-23
 - Academic Courses: 25
 - Non Academics Courses: 18







	2019-	2020-	2021-	2022-
	2020	2021	2022	2023
No. of faculty's ideas generated	4	5	8	20
No. of students' ideas generated	41	45	54	140
No. of faculty's Innovation/prototypes developed	2	4	4	10
No. of student's Innovation/prototypes developed	1	22	26	136
No. of IPs generated, published and granted	1	5	8	9
No. of Student &Faculty Start- ups/Ventures established	3	4	4	17
Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus (in INR)	25000.00	50000.00	75000.00	85000.00
Amount grant or fund supported to student &Faculty lead Innovations, start- ups and IPR (in INR)	15000.00	50000.00	100000.00	110000.00
No. of Technology Transfer and Commercialization happened	0	0	0	0

F. Highlight a few best IIC Faculty/ Student members and their achievements/ Rewarded for the innovations at different forum

- 1. Dr. Aakash Ved , IPR Activity Coordinator has published 8 National and International Patents in last two years
- 2. Innovation Ambassadors of GITM are successfully Mentoring Schools of Intermediate Level under ATL School Linkage scheme

IIC Member	External Mentorship
Dr. Rishi Asthana	Jaipuria School, Lucknow
Dr. Priyanka Jaiwal	 Jaipuria School, Lucknow Kashishwar Inter College, MohanlalGanj, Lucknow
Dr. Jyoti Agarwal	Jaipuria School, Lucknow
Ms. Vidushi Srivastava	 Jaipuria School, Lucknow Kashishwar Inter College, MohanlalGanj, Lucknow



3. Mr. Ritik Chaurasia, Civil Engineering-GITM, Semi-Finalist in Global Student Entrepreneur Awards, Name of Startup : Economical & Purified RO Plant

4. Winners of Startup Plan Competition:

Dept.	Student	Mentor
ME	Ankit Kumar Gaur	Dr. Piyush Pal
CE	Akhilesh Kumar Rawat	Mr. Raj Kumar Gupta
EE	Arunima Mishra	Mr. Abhinav Shukla

5. Inter Collage Business Plan Competition:

	Business Plan	Students
Unique Idea Award	Banana Leaf of Clothing	Sudiksha Pandey
Best Plan Award	Labour Mandi	Prateek Pandey
Best Presenter Award	Asthma Watch	Prakhar Srivastava

G. Highlight selected best Innovations & images with mention of inventor/innovation name

Participated Teams for SMART INDIA HACKATHON 2022

Hardware Category:

Department	Team Name	Team Leader	Mentor	Problem statement Title
Biotechnology Engineering	Water Saviours	Mahima Gupta	Ms. Kanchan Bhatt	To develop new ways of wastewater management systems in rural areas.
Electrical Engineering	Aagaaz	Praveen Yadav	Ms. Swatika Srivastava	Automatic Water purifier with mass management system
Electrical Engineering	Udaan	Mayank Shukla	Md. Shariq Ansari	Eco-friendly air conditioner using solid state Peltier modules
Electrical Engineering	Spark	Mahesh Gupta	Ms. Poonam Yadav	Mountainous area accident prevention and traffic controller
Electronics & Comm. Engineering	Drishyak	Unnati Singh	Ms. Tanu Dhusia	Design a robot for handling medical emergencies, search and rescue operation etc.
Civil Engineering	Civil Tech	Dileep Singh	Mr. Raj Kumar Gupta	Self-Cleaning Road
Civil Engineering	Civil Warriors	Priya Bharti	Mr. Shubhendu Mishra	Intelligent Analysis of Traffic Congestion from G.I.T.M. to Matiyari







Civil Engineering	Civil Stars	Nihal Srivastava	Mr. O.P. Pal	Utilization of Plastic waste material in construction of rural roads	
Mechanical	Mech	Rinku	Mr. Ashish	Fixed beam drone	
Engineering	Flyer	Rawat	Srivastva		
Mechanical	Mech	Arpit	Mr. Abhay	Solar powered sanitization machine	
Engineering	Shield	Maurya	Kumar Mishra		

Software Category:

Department	Team Name	Team Leader	Mentor	Problem statement Title
Computer Science & Engineering	Console.log	Aman kasudhan	Mr. Yogendra Pratap Singh	Prediction of admission & jobs in engineering & technology With respect to demographic locations
Computer Science & Engineering	Houndwarriors	Wasim Siddique	Ms. Samiksha Singh	Animal tracking system using gps module
Computer Science & Engineering	Haulwarriors	Samarjeet Gautam	Mr. Shivam Shukla	Near cart
Computer Science & Engineering	HOOPTIE	Nishant Pandey	Mr. Durgesh Tiwari	Project on hooptie
Computer Science & Engineering	Collateral	Anuj Singh	Mr. Ajay Kumar	Contactless door using IOT









- H. Highlight selected startups established by students/faculties with mention of founder/ cofounder name:
 - 1. UREASE BACTERIA USE AS SELF HEALING CONCRETE Mr. Shubhendu Mishra (Assistant Professor & Member-IIC GITM, Dept. of Civil Engineering)
 - 2. TULA-SOLAR POWER (Building Your Trust in Solar) Er. Arvind Raja- Founder and CEO (External Expert- IIC GITM)
 - 3. DIZITAL DREAMS Mr. Vikas Tiwari - Founder and CEO (External Expert-IIC GITM)
 - **4.** Use of Waste Plastic as Brick Manufacturing Anand Shekhar (Student Member-IIC GITM)
 - 5. Sand Sieving Machine Satyam Kushwaha (Student Member-IIC GITM)
 - 6. Partial Replacement of Concrete with Glass Fibre Om Verma & Md. Abid Khan (Student Members- IIC GITM)
 - 7. KRISHI SHIELD INNOVATIONS Dr. Rishi Asthana (President-IIC-GITM and Director-GITM
 - 8. E-Sense Mobility Solutions Dr. Rishi Asthana (President-IIC-GITM and Director-GITM
 - 9. Stitch Craft- Your Local Tailor Md. Amaan – Student Member, IIC-GITM
 - 10. FarmConnect Analytics(An alternative for radical Innovations)Mr. Abhinav Shukla ((Assistant Professor & Member-IIC GITM, Dept. of Electrical Engineering)
- I. List if any breakthrough Innovations/ Technology Developed at the institute (2-3 technology with 2-3 lines about technology and innovation): NIL
- **J.** Participation of IIC-institute in various programs of Central and State Govt. Highlighting especially for the schemes or programs
 - NISP Adoption status: Trained Faculty, Policy Formulation, Policy Implementation:

Trained Faculty Name:	Dr. Priyanka Jaiswal
Policy Formulation Status:	Completed in all respect
Policy Implementation Status:	Completed in all respect

K. ATL Linkage & Mentoring

- Name of Schools
 - Central Academy Senior Secondary School Barabanki- School Code: 230211553
 - Kashishwar Inter College Lucknow- School Code: 243714496
 - Shri Sundar Lal Kamla Inter College Lucknow-School Code: 166119504

***** Number of Activities Conducted

- Orientation Session: 3
- Training & Boot camps: 3







- Mentor-Mentee Meet: 6
- Exposure Visit: 3
- Participation of Schools in IIC Activities: 6
- L. Yukti Innovation Challenge:
 - Number of young Innovators nominated for Yukti Innovation Challenge-2023: 2

M. Innovation Ambassadors

- Number of Innovation Ambassadors Basic Level Trained: 17
- Number of Innovation Ambassadors Advanced Level Trained: 16
- Number of Activities Conducted Internally: 40
- Number of Activities Conducted Externally : 10
- Number of Innovation Ambassadors Upskilling/Reskilling certificate Trained: 10

N. E Recourses Developed : 8

O. Detail of Social Media & Connections of IIC institute

- Institute website: www.gitm.goel.edu.in
- Institute Facebook page:
- www.facebook.com/GoelGroupLko
- Institute Twitter account:
 - www.twitter.com/GoelGroup
- Institute Instagram account www.instagram.com/goel_group_of_institution
- **P.** Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell-

The testimonials are uploaded on institute website Website link: https://gitm.goel.edu.in/outreach/

- Q. Images: https://gitm.goel.edu.in/gic-image-gallery/
- R. Contact: Dr. Rishi Asthana

Director& President, IIC, GITM Email:director.gitm@goel.edu.in Mobile: 9873999553

Dr. Priyanka Jaiswal Convener, IIC, GITM Email: priyanka.jaiswal@goel.edu.in Mobile: 9516242236