




# Department of Information Technology

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## Message from Vice-Chairman, GLBITM

Congratulations to the Information Technology department for their dedicated work in producing the departmental magazine. Needless to say, efficient communication, in addition to several other factors, plays a critical part in the success of any firm. I am confident that this departmental magazine will reflect the department's work and improve communication among GLBians. I am convinced that the magazine will encourage students to engage in research, with a focus on entrepreneurship.



**Mr. Pankaj Agarwal**  
(Vice Chairman)

## Message from Director, GLBITM



**Dr. Rajeev Agrawal**  
(Director)

To begin, I express my gratitude to the Department of Information Technology for their efforts in publishing a magazine dedicated to providing readers with a mix of timely and thought-provoking articles on technology and other topics. I am confident that this will reflect the institution's dedication to open discourse and will provide a glimpse of the department's varied activities and accomplishments. I am convinced that the magazine will encourage students to be more creative, with an emphasis on innovative learning. For their efforts, I express my gratitude to the dedicated staff and their team.

## Message from HOD-IT

The concept that our department is publishing a magazine is a wonderful honor. The idea of keeping professors and students up to date on departmental happenings is commendable. It gives me great pleasure to know that our kids have great potential, and I am hopeful that their achievements will encourage other students to reach their goals, which will require them to have a clear vision and the determination to follow through. The Department Editorial Board has done an outstanding job developing and publishing the magazine. I wish the entire crew the best of luck in their future endeavors.



**Dr. P.C Vashist**  
(HOD – IT)

## Technical Events

### Online One Week FDP on Reach to Innovative Tech Concept | Applications | Implementation

Department of Information Technology, GL Bajaj Institute of Technology & Management organized Greater Noida has organized one-week Faculty Development Program (FDP) on Reach to Innovative Tech Concept | Applications | Implementation dated from 28th -2nd July 2021. This FDP was on the latest technology with hands-on knowledge. The Technical sessions were taken by the expert:

Dr. Monika Mangla, Lokmanya Tilak College of Engineering, Navi Mumbai

Dr. Sanjeev Shrivastava, National Coordinator I-STEM Indian Institute of Science Bangalore.

Mr. Arjun Chaudhary, Assistant Professor, Faculty of science, technology, and forensic, Sardar Patel University of Police, Security and Criminal Justice, Jodhpur, Rajasthan.

Mr. Kuver Pratap Singh, OLAM International Singapore, Manager Hybrid Cloud Computing.

Dr. Vaishali Wadhwa, Panipat of Engineering and Technology, Panipat, Haryana.

This was a faculty development program on the latest technology with hands-on knowledge.



## Online One Week FDP on Reach to Innovative Tech Concept | Applications | Implementation

**Online One Week  
Faculty Development Program  
on**

**Reach to Innovative Tech  
Concept | Applications | Implementation**

**28<sup>th</sup> to 2<sup>nd</sup> July, 2021**



**Organized by:**  
Department of Information Technology (NBA Accredited)

**GL BAJAJ**  
Institute of Technology & Management  
**FIND YOUR SPARK**  
Approved by AICTE, Ministry of HRD, Govt. of India  
and affiliated to AKTU, Lucknow

**Chief Patron (s)**  
Dr. R. K Agarwal  
Hon'ble Chairman, GLBITM  
&  
Sh. Pankaj Agarwal  
Vice-Chairman, GLBITM

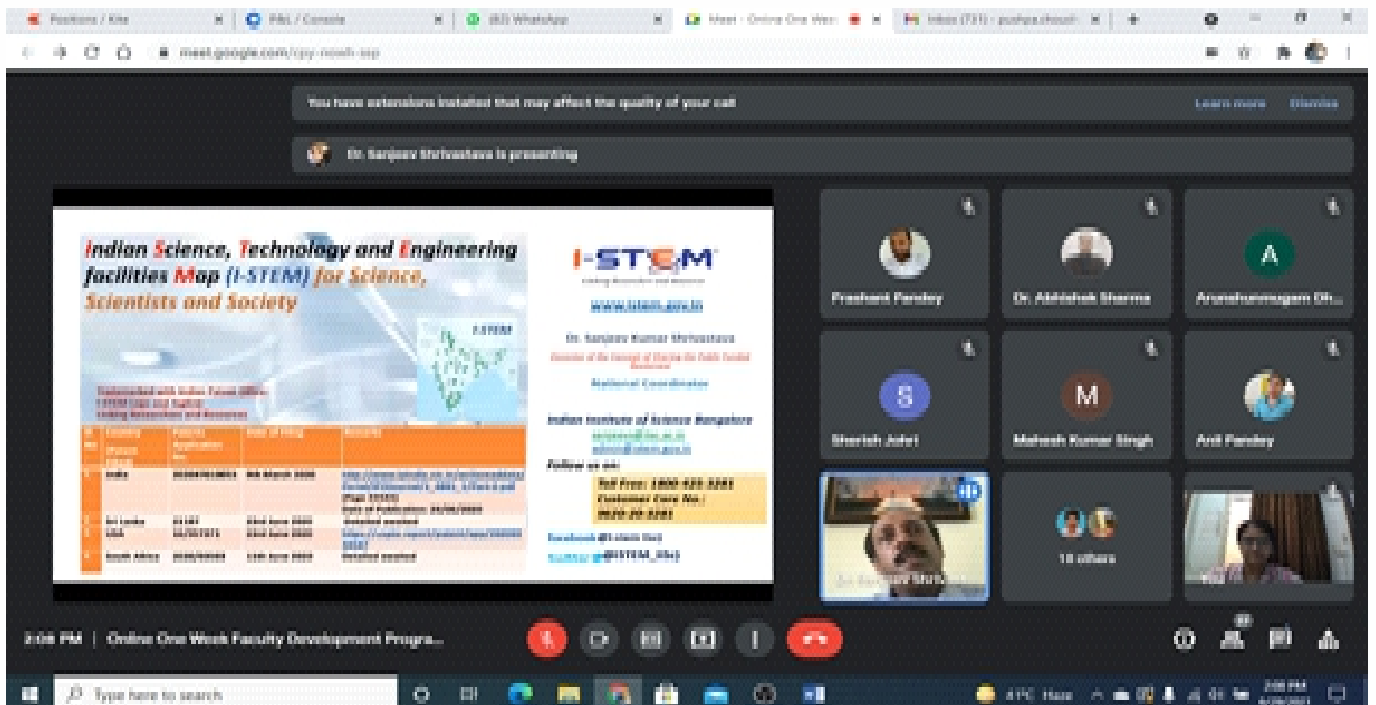
**Patron**  
Dr. (Prof.) Rajeev Agrawal  
Director, GLBITM

**FDP Chair**  
Prof. (Dr.) P. C Vashist  
Head of Department, Dept. of IT

**FDP Organizing Coordinator**  
Prof. Pushpa Choudhary  
Professor, IT Dept.

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Mr. Rajnish



The screenshot shows a Google Meet interface with a presentation slide titled "Indian Science, Technology and Engineering facilities Map (I-STEM) for Science, Scientists and Society". The slide includes the I-STEM logo, a map of India, and a table of project details.

Country	Project	Year of I-STEM	Status
India	INDIA/STEM/001	2018 March 2020	Completed
USA	USA/STEM/002	2018 June 2020	Completed
USA	USA/STEM/003	2018 June 2020	Completed
India	INDIA/STEM/004	2018 April 2020	Completed

The slide also mentions the project is funded by the Department of Science and Technology, Government of India, and provides contact information for the Indian Institute of Science Bangalore.

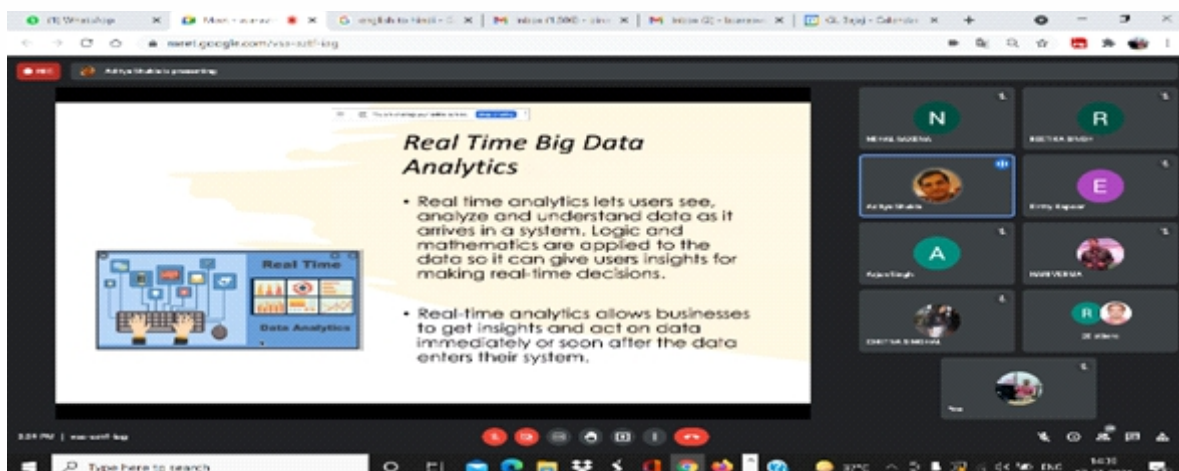
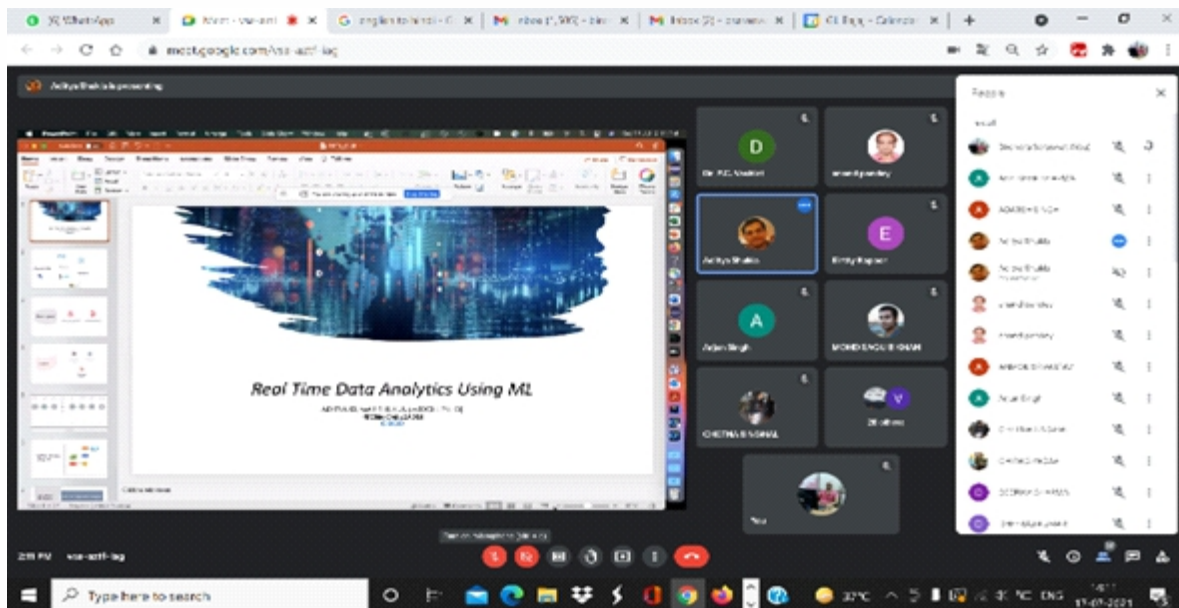


## Guest Lecture on Real-Time Data Analysis with Machine Learning

Department of Information Technology, GL Bajaj Institute of Technology & Management organized Greater has organized a guest lecture on “Real-Time Data Analysis with Machine Learning” dated on 17.07.2021. The expert for this session was Mr. Aditya Kumar Shukla, Technical Leader CISCO, AppDynamics, India.

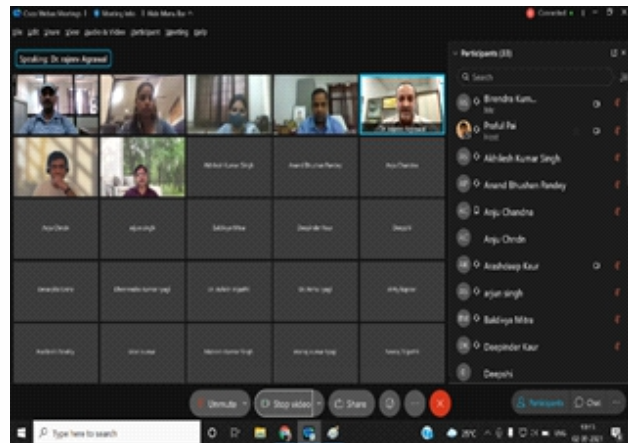
The outcome of Real-time data analysis with a Machine Learning presentation is to change the mindsets of students about Machine Learning and its usages, it energized the audience and now they can think better about the practical scenarios and they can try it in their local environment. The message of this session was clear for the audience that thinks differently than the typical application development.

Prof. (Dr.) P.C Vashist, HOD IT also addressed the audience and put his views on Real-time data analysis with Machine Learning and also promised to have more such Guest lectures.



## Workshop on AI for Engineering using MATLAB

On 2<sup>nd</sup> September 2021, the Department of Information Technology organized one day workshop on "AI for Engineering using MATLAB" in collaboration with MathWorks. The workshop was organized under the "Applications-based Emerging Technologies Research Group" of the IT Department. The experts for the sessions were; Dr. Praful Pai, Education Technical Evangelist, MathWorks, India, Dr. Devarpita Sinha, Education Technical Evangelist, MathWorks, and Mr. Pratyush Roy, Engineering Development Group, MathWorks, introduced by the Emcee for the workshop, Ms. Sumita Lamba, Assistant Professor, Department of IT. The workshop will focus on the implementation of AI techniques using MATLAB and Simulink. It will be a hands-on workshop where the participants will become skilled at the implementation part. This workshop will be beneficial because MATLAB provides huge computing resources and toolboxes for the learners to create and implement their innovative algorithms and approaches. AI is constantly making its way into every field due to its flexibility and ability to respond naturally to various conditions or stages that can occur in any given modern system.





## Two Days Hands-On Workshop on Mobile App Development

Department of Information Technology, GL Bajaj Institute of Technology & Management has organized two days hands-on workshop on “Mobile App Development” from 08.10.2021 and 09.10.2021 by speaker Mr. Sameer Srivastava, Sr. Technical Officer, Indian Council of Agricultural Research, New Delhi.



**Hands-On Workshop**  
**on**  
**Mobile App Development**  
08-09<sup>th</sup> October 2021 | Time : 09:30 am - 04:30 pm  
Venue: Academic Block - 1

<b>Chief Patron</b> <b>Dr. R.K. Agarwal</b> Chairman, GLBITM	<b>Patron</b> <b>Sh. Pankaj Agarwal</b> Vice Chairman, GLBITM	<b>Patron</b> <b>Prof. (Dr.) Rajeev Agrawal</b> Director, GLBITM
<b>Speaker</b> <b>Mr. Sameer Srivastava</b> ICAR-IASRI, New Delhi (Computer Application Division)	<b>Convener</b> <b>Prof. (Dr.) P.C. Vashist</b> Head-IT	<b>Coordinator</b> <b>Mr. Birendra Kumar Saraswat</b> Assistant Professor - IT

Organized by IT Department, G. L. Bajaj Institute of Technology and Management, Greater Noida



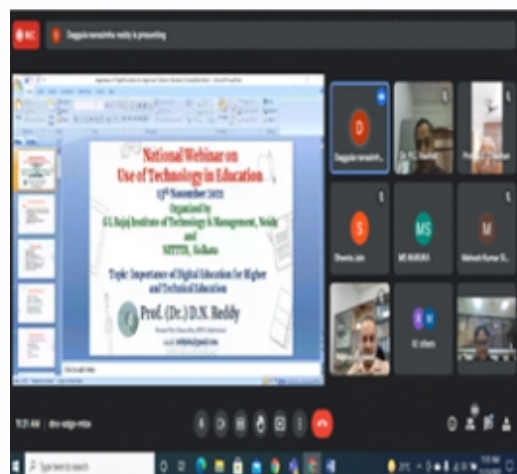
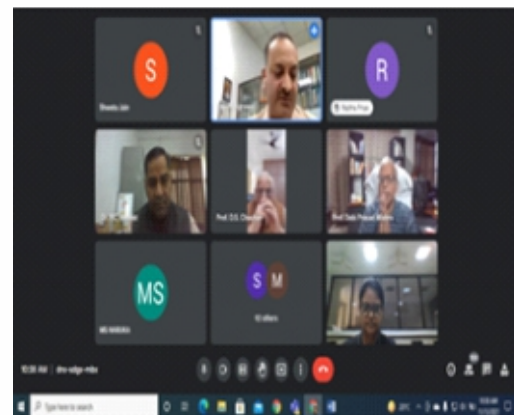


## Online National Webinar on Use of Technology in Education

Department of Information Technology, GL Bajaj Institute of Technology and Management, Greater Noida (GLBITM), and NITTTR Kolkata jointly organized an international level webinar on "Use of Technology in Education" Under the e-Lecture Series of NEP-2020 on 13 November 2021.

The inaugural session of the program was conducted by Professor Rajiv Agarwal (Director-GLBITM), HoD (IT) in the presence of Guest of Honor Professor Devi Prasad Mishra, Director, NITTTR Kolkata, Chief Guest Dr. D. S. Chauhan, Former VC Dr. APJ AKTU, Lucknow.

Expert Talks were given in webinar by Dr. D. N. Reddy, Former VC, JNTU, Dr. N. C. Sivaprakash, Indian Institute of Science, Bangalore, and Dr. Surendra Rathore, SPIT, Andheri, Mumbai. To create awareness amongst faculty members, students, and other stakeholders in the higher education system to discuss highlights and implications of technology in higher education. The webinar was attended by over 200 people who were interested in learning more about the impact of technology on new education policies.



## National Webinar on Challenges of Learning Loss Experienced During an Ongoing Covid-19 Pandemic

Department of Information Technology and Institution Innovation Council of GLBITM conducted a national webinar e-Lecture series on “Challenges of learning loss experienced during ongoing covid-19 pandemic” on 27th Nov 2021 at 02:30 PM under the NEP-2020. The program started with the welcome of all the dignitaries by the Director of GLBITM, Dr. Rajeev Agrawal. The Chief Guest, Prof. Pulak Mohan Pandey, Director BIET Jhansi, shared his thoughts on the importance of NEP-2020 and its special feature to nurture technical student creativity through technology. Prof. Pandey briefly how online learning was beneficial in a pandemic. And learning attention is very high in the physical mode of teaching as compared to online mode teaching. The program further proceeded with the lecture on “Challenges of learning loss experienced during ongoing covid-19 pandemic” in the context of NEP-2020 by Prof. Umakant Kulkarni (SDMCET- Dharwad, Karnataka), Dr. Anil Kumar (Director, Institute of Lifelong Learning, Adamas University, Kolkata) and Dr. Shahanaz Ayub (Dean R & D, BIET Jhansi). The audience got benefitted by learning about the advantages of NEP-2020 through the views of learned and experienced speakers of the event. The program ended with a vote of thanks by Prof. P.C. Vashisht, Head Department of Information Technology.



## Navparvartan Jan Jagrukta Program

A District Level Innovation Exhibition on Innovation Public Awareness was organized by the Department of Information Technology, GL Bajaj Institute of Technology and Management, Greater Noida on 29th December 2021. This program was sponsored by the Council of Science and Technology, Uttar Pradesh.

The purpose of this program was to make the students aware of the innovations as well as the schemes run by the government to protect the innovation so that more and more students can take advantage of these schemes, and motivate the students for innovations and entrepreneurship.

Inauguration of Innovation Exhibition GLBITM, Greater Noida, Director Dr. Rajiv Agarwal, Anil Kumar Singh (Chief Development Officer, Gautam Budh Nagar), Shailendra Bahadur Singh (District Social Welfare Officer, Gautam Buddha Nagar), Dr. Suresh Chandra, Scientist, Archana Shiromani (District Coordinator Science Club, Gautam Budh Nagar), and Dr. P. C. Vashistha (HOD-IT).

The program was organized by Dr. Pushpa Chaudhary and anchoring was done by Rajni Singh. The best innovation ideas were evaluated by the jury members Dr. Arun Kumar Singh, Dr. Ashish Tripathi, Dr. Tarun Gupta, Mahesh Kumar Singh, and Rajat Mehrotra.

The objective of the event was to encourage young students to make maximum participate in future young entrepreneurs. More than 300 participants participated in this workshop.

The workshop was a total success and the 6 best innovation ideas were awarded. First prize Piyush Parashar 5000 cash, second prize Hrithik Sharma 3000 cash, third prize Piyush Jaiswal 2000 cash, and three consolation prizes Prashant Yadav, Gyan Singh, and Divyanshi Katiyar 1000 each in cash amount. honored as. Such programs always encourage the students towards innovation and entrepreneurship.



## Navparvartan Jan Jagrukta Program



**विज्ञान एवं प्राद्योगिकी परिषद्, उ० प्र०**  
 ( विज्ञान एवं प्राद्योगिकी विभाग, उ० प्र० शासन )  
 के संयुक्त निर्देशक के आदेशानुसार जिला विज्ञान क्लब,  
 गौतम बुद्धनगर के अध्यक्ष/जिलाधिकारी,  
 उपाध्यक्ष/मुख्य विकास अधिकारी की सहमति से जनपद में



# नवप्रवर्तन जन जागरूकता

कार्यक्रम निम्नवत् आयोजित किया जा रहा है।

**असंगठित क्षेत्र के नवप्रवर्तकों हेतु जिला स्तरीय नवप्रवर्तन प्रदर्शनी**

सौजन्य से  
 आईटी विभाग, जी एल बजाज इंस्टीट्यूट ऑफ टेक्नोलॉजी एंड मैनेजमेंट, ग्रेटर नोएडा  
 दिनांक: 29.12.2021

अर्चना शिरोमणी जिला समन्वयक, विज्ञान क्लब, गौतम बुद्धनगर	घमैन्द सखेला बेसिक शिक्षा अधिकारी, गौतम बुद्धनगर	डा. धरमवीर सिंह जिला विद्यालय निरीक्षक, गौतम बुद्धनगर	अजित कुमार सिंह मुख्य विकास अधिकारी, गौतम बुद्धनगर	सुहास एल.वाई जिलाधिकारी, गौतम बुद्धनगर
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**विज्ञान एवं प्राद्योगिकी परिषद्, उ० प्र०**

( विज्ञान एवं प्राद्योगिकी विभाग, उ० प्र० शासन )  
 के संयुक्त निर्देशक के आदेशानुसार जिला विज्ञान क्लब,  
 गौतम बुद्धनगर के अध्यक्ष/जिलाधिकारी,  
 उपाध्यक्ष/मुख्य विकास अधिकारी की सहमति से जनपद में



# नवप्रवर्तन जन जागरूकता

कार्यक्रम निम्नवत् आयोजित किया जा रहा है।

**असंगठित क्षेत्र के नवप्रवर्तकों हेतु जिला स्तरीय नवप्रवर्तन प्रदर्शनी**

आम जनता के लिए

दिनांक: 29.12.2021	समय: प्रातः 11 बजे	स्थान: आईटी विभाग, जी एल बजाज इंस्टीट्यूट ऑफ टेक्नोलॉजी एंड मैनेजमेंट, ग्रेटर नोएडा
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उक्त कार्यक्रम में आप सादर आमंत्रित हैं। चयनित नवप्रवर्तकों को जिला विज्ञान क्लब, गौतम बुद्धनगर की ओर से सम्मानित एवं पुरस्कृत किया जायेगा।

<p>अर्चना शिरोमणी जिला समन्वयक, विज्ञान क्लब, गौतम बुद्धनगर, 9818215135</p>	<b>सम्पर्क सूत्र</b>	<p>डा० पी. सी. बशिष्ठ एच.ओ.डी. ( आईटी ) जी एल बजाज इंस्टीट्यूट ऑफ टेक्नोलॉजी एंड मैनेजमेंट, ग्रेटर नोएडा</p>
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## Navparvartan Jan Jagrukta Program





## Extra-Curricular Activities

### Felicitation cum Orientation Program

Department of Information Technology, GL Bajaj Institute of Technology & Management has organized a Felicitation cum Orientation Program dated 17/09/2021 at SHD Hall. This is the most important part of each college's orientation program, regardless of the course's nature. Students must be made informed of their college's social atmosphere. Extracurricular activities, social groups, events, workshops, and other special training programs accessible in the college course are all examples of this social element. This motivates them and aids their social integration into the campus atmosphere. The most important goal of the introductory sessions is to educate participants. This felicitation program has been organized for peer-to-peer interaction programs between 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Year Students.





## Extra-Curricular Activities

### Farewell Party

The Department of Information Technology had organized a Farewell Party for Batch: 2016-20 and 2017-21 on 9/10/21.



## New Trends

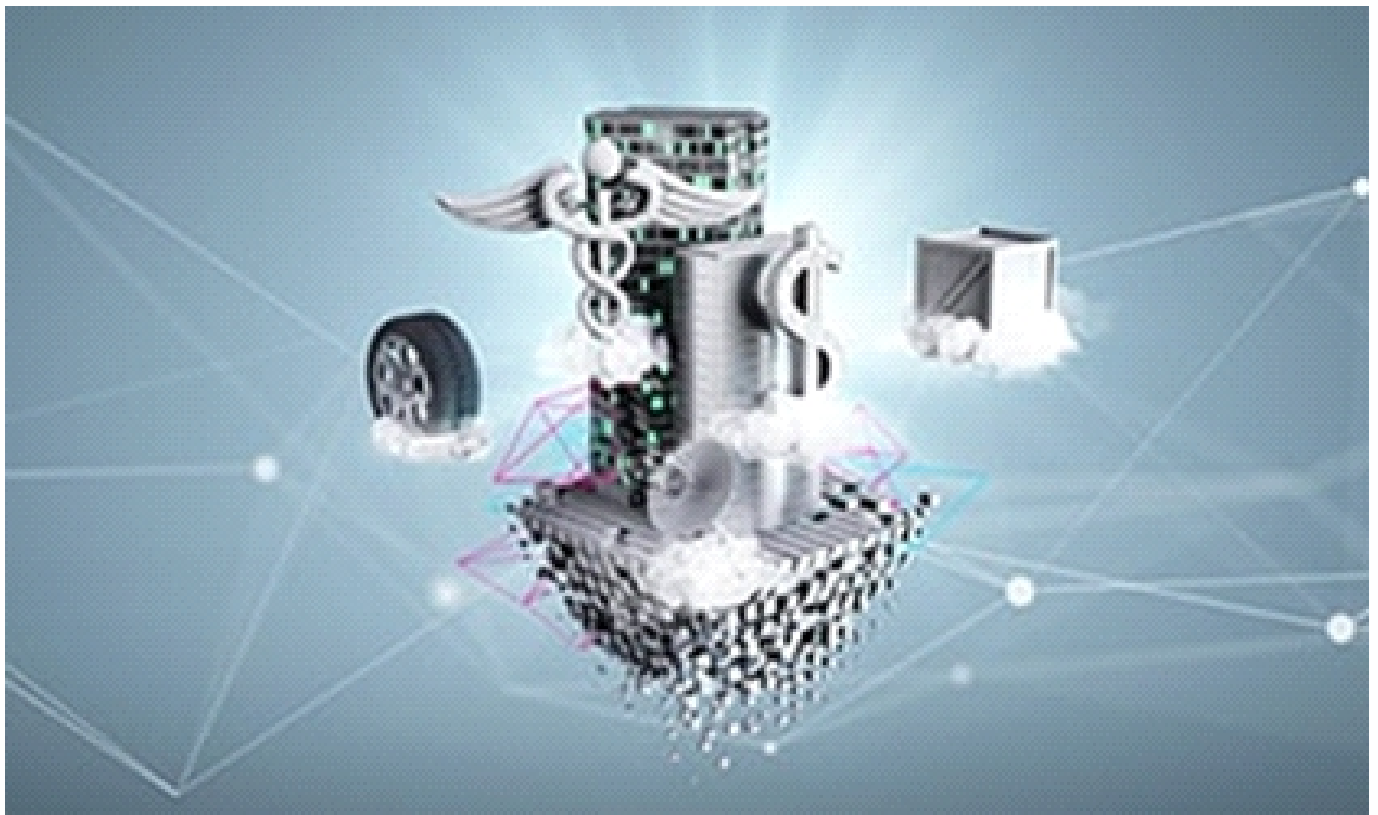
### Data-Sharing Made Easy

A slew of new technologies promises to make data-sharing among and between businesses easier while keeping the veil of anonymity intact. Organizations are unlocking greater value from their sensitive data while accessing massive volumes of externally sourced data that has long been off-limits, as part of a growing trend. This might open up a whole new world of data-driven possibilities. The capacity to securely share data with others within an ecosystem or value chain is spawning new business models and solutions. Researchers, medical authorities, and drug companies, for example, were able to speed the development of therapies and vaccines in the early days of the COVID-19 pandemic by combining clinical data on shared platforms. Furthermore, the same data-sharing protocols have been used to help pharmaceutical companies, government agencies, hospitals, and pharmacies plan and implement large-scale immunization programs that prioritize efficiency, safety, and intellectual property protection.



## Cloud Goes Vertical

The focus of digital transformation has switched from addressing the IT requirements of an industry-agnostic organization to satisfying the specific strategic and operational requirements of each sector and subsector. Hyperscale and SaaS providers are collaborating with global system integrators and customers to develop modularized, vertical-specific business services and accelerators that can be quickly adapted and expanded for distinct distinction. As this trend takes traction, deploying apps will become more of an assembly process than a creative one, potentially rearranging the entire value stack. Business processes will be sold as strategic commodities, allowing businesses to spend scarce development resources on strategic and competitive issues.





## Vision

To develop competent IT professionals catering to the needs of Industry and society in a global perspective.

## Mission

To attain academic & professional excellence with collective efforts of all stakeholders through

**M1:** Dissemination of basic concepts and analytical skills.

**M2:** Exposure to new tools in the area of Information technology.

**M3:** Effective interaction with industry for better employability.

**M4:** Inculcating values and professional ethics with social responsibility.

## Program Educational Objectives

**PEO1:** To provide students a strong foundation in mathematical and IT fundamentals with emphasis on different programming languages/ platforms.

**PEO2:** To prepare students with a strong foundation in IT tools and analytical skills.

**PEO3:** To analyze, design, and develop efficient and cost-effective IT solutions for society.

**PEO4:** To become a successful professional in the software industry with leadership quality and value.

**PEO5:** To provide a supportive academic environment and guidance for life-long learning.

## Program Outcomes (PO's)

Students of this Program are expected to demonstrate:

**PO1-** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the Solution of complex engineering problems.

**PO2-** Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3-** Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO4-** Conduct Investigations Of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO5 -** Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO6 -** The Engineer and Society: Apply to reason informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO7 -**Environment, and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8 -** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

## Program Outcomes (PO's)

**PO9-** Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10-** Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO11-**Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader.

**PO12 -** Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in th

## Program-specific Outcomes

**PSO 1:** Design and develop an application/product that efficiently utilizes system software and hardware to cover current user requirements in social and economic form.

**PSO 2:** Apply and acquire knowledge of computer network in the implementation of secure data communication and reliable network system.

**PSO 3:** Design and implement knowledge-based discovery, machine-based learning by using the concept of DBMS, soft computing, neural network, image processing, and pattern recognition etc.

**PSO 4:** Design and develop mobile-based applications that use the concepts of the latest application system development technologies.



## Department of Information Technology

The Department of Information Technology at G.L. Bajaj Institute of Technology & Management was founded in 2007 with the goal of producing qualified IT professionals who can meet the needs of industry and society on a global scale. By exposing students to new IT tools and technologies, the Department hopes to help them achieve professional greatness. The flagship branch of engineering, information technology, focuses on scientific research, scientific programming, application programming, and software engineering. The Department has well-equipped laboratories, lecture halls, seminar halls, tutorial rooms, and faculty sections, all with cutting-edge technology and software. The Department has a mix of senior and junior faculty members who serve as mentors to the department's equally dedicated and hardworking students.

### From HOD's Desk

It gives me great joy to congratulate the editorial team on continuing and publishing their collective thought process as a magazine. It serves as a display of their research efforts and accomplishments, as well as a reflection of the department's creative and cultural activities. It gives me great pleasure to know that our students have enormous potential, and I am hopeful that the accomplishments of the students featured in this magazine will encourage other students to reach their goals, which will require them to have a clear vision and determination to pursue it. The Department Editorial Board has done an outstanding job developing and publishing the magazine. I send my warmest greetings.

#### PATRONS

**Dr. Ram Kishore Agarwal**  
(Chairman)

**Mr. Pankaj Agarwal**  
(Vice Chairman)

**Dr. Rajeev Agrawal**  
(Director)

**Dr. P.C Vashist**  
(HOD – IT)

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 **GL BAJAJ**  
Institute of Technology & Management  
**FIND YOUR SPARK**  
Approved by AICTE & Affiliated to AKTU

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