




# 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 Activities

### **Online Workshop on Intellectual Property Rights**

An online Workshop on **Intellectual Property Rights** was organized successfully on **20 March 2020** by the **Department Of Information Technology, GL Bajaj Institute of Technology & Management, Greater Noida** for Faculty members & Students by **speaker Prof. A. K. Misra, Retired Professor from MNNIT Allahabad**

### **During the workshop the following topics were discussed**

1. Registration on SERB, DST & CSTUP Website
2. Online Submission of Proposal
3. Tracking system of Proposal
4. Submission of Progress Report
5. Permission process for Time Extension
6. What is Intellectual Property Rights?
7. What is Patent, Trademark, Logo, and Design & Copyright?
8. What is patentable?
9. Registration on Indian Patent Website
10. Filing of Patent
11. Patent Follow-up
12. Patent Grant



## Workshop on Research Methodology

Department of Information Technology, GL Bajaj Institute of Technology & Management, Greater Noida has organized two days **workshop on Research Methodology** dated **18-19 April 2020** by speaker **Mr. Mukul Jain, Assistant Professor, IPEC Engineering College, Ghaziabad.**

### Objective of this Workshop was:

1. To create a way to find the research problem and selection of appropriate research design.
2. Understanding the appropriateness of mathematical software research data analysis packages.
3. Make participants understand how to write a text once writing research proposals.



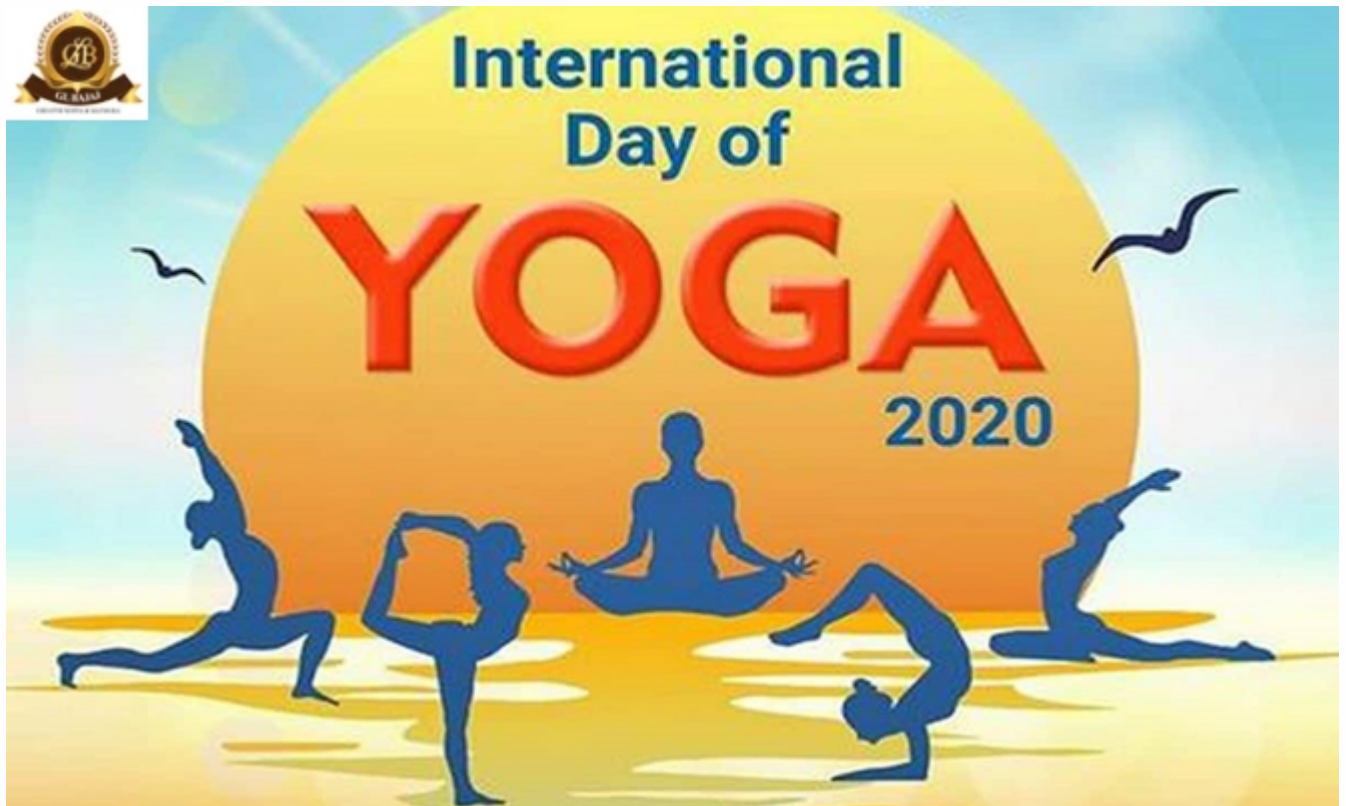
## Extra-Curricular Activities

### Online Yoga Day Celebration

Department of Information Technology has organized **Online Yoga Day Celebration on International Yoga Day on 21<sup>st</sup> June, 2020**

योग” - यह शब्द अपने आप में ही पूर्ण वज्जिज्ञान के समान है जो शरीर, मन, आत्मा और ब्रह्मांड को एकजुट बनाता है। योग का इतिहास करीबन 5000 साल पुराना है, जसि प्राचीन भारतीय दर्शन में मन और शरीर के अभ्यास के रूप में जाना जाता है। योग की वभिन्न शैलियाँ शारीरिक मुद्राएँ, साँस लेने की तकनीक और ध्यान या वशिराम को जोड़ती हैं।

अंतराष्ट्रीय योग दविस (**International Yoga Day**) की शुरुआत सर्वप्रथम 21 जून 2015 को भारत में हुई। माननीय प्रधानमंत्री श्री नरेंद्र मोदी जी के द्वारा संयुक्त राष्ट्र महासभा (UNGA) को दिए गए प्रस्ताव को स्वीकृतमिली और 21 जून को अंतराष्ट्रीय योग दविस के रूप में मनाया जाना प्रस्तावित किया गया।



## New Technology Trends 5G

By 2020, the entire planet, as well as individual nations, will be under the spell of ultra-fast internet connections. Also, don't overlook all of the advantages that come with it. The 5G network will undoubtedly make its way in the technology sector in the near future. It will also provide a slew of advantages, like increased internet speed, capacity, and latency. Such advantages are certain to make it one of the most important technical trends to watch in 2020 and beyond. Novel networks will continue to sprout up around the world, devices (including those with advanced 5G bandwidth cameras) will become more readily available, and businesses will continue to demonstrate new industrial, automotive, medical, and educational use cases. According to the latest projections, fully integrated 5G networks will begin to enter the market in 2020, with unfathomable coverage rates.





## Personalized and Predictive Medicine

Technology is currently transforming healthcare at an unprecedented rate. Our ability to capture data from wearable devices such as smart watches will give us the ability to increasingly predict and treat health issues in people even before they experience any symptoms.

When it comes to treatment, we will see much more personalized approaches. This is also referred to as precision medicine which allows doctors to more precisely prescribe medicines and apply treatments, thanks to a data-driven understanding of how effective they are likely to be for a specific patient.

Although not a new idea, thanks to recent breakthroughs in technology, especially in the fields of genomics and AI, it is giving us a greater understanding of how different people's bodies are better or worse equipped to fight off specific diseases, as well as how they are likely to react to different types of medication or treatment.

Throughout 2020 we will see new applications of predictive healthcare and the introduction of more personalized and effective treatments to ensure better outcomes for individual patients.





## Achievement of IT Department

### Year wise topper list

7<sup>th</sup> Sem 1<sup>st</sup> Topper: MITHILESH SHARMA (1619213053)

7<sup>th</sup> Sem 2<sup>nd</sup> Toppers: PRAGYA SINGH (1619213065)

YASH BHATIA (1619213124)

5<sup>th</sup> Sem 1<sup>st</sup> Topper: DIMPAL KUMARI (1719213040)

5<sup>th</sup> Sem 2<sup>nd</sup> Topper: DIKSHA AGRAWAL (1719213039)

3<sup>rd</sup> Sem 1<sup>st</sup> Topper: OJAS SINGHAL (1819213075)

3<sup>rd</sup> Sem 2<sup>nd</sup> Topper: HIMANSHI CHAUHAN (1819213049)

## Achievement of IT Department

### Research Papers

**Mr. Mahesh Kumar Singh-** Event Driven Recommendation for E-commerce using Knowledge based Collaborative Filtering Technique.

**Mr. Harikesh Pandey:** Detect and track the motion of any moving object using OpenCV

**Ms. Paramita De:** Smoothing Junctions of Engineering Drawings using C2 Continuity

**Mr. Dheerendra Kumar Tyagi:** Agile Planning and Tracking of Software Projects using

**Mr. Manoj Kumar Tyagi:** Toward green computing in wireless sensor networks: prediction-oriented distributed clustering for non-uniform distribution.

**Ms. Priyanka Saxena:** Application of rules & authorization key for secured online training – a survey

**Dr. Neha Tyagi:** Coronavirus Spreading Forecasts Based on Susceptible-Infectious-Recovered and Linear Regression Model

## 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)

#### EDITORIAL BOARD

**Dr. Pushpa Choudhary**

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

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