



GSFC
UNIVERSITY
EDUCATION RE-ENVISIONED

EVENTIA

A BIMONTHLY NEWSLETTER

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Message from President's Desk

Shri P.K. Taneja, IAS (Retd.)

President - GSFCU

Former ACS Industries, Home and Forest & Environment, GoG



Warm greetings from the office of the president of GSFC University, an academy that strives for excellence through constant evolution and Re-envisioning. I am indeed happy to share the progress over the last year and new plans that we have for making it grow further.

I would like to reiterate that in line with its Vision, the University envisaged being a boutique where the course curriculum is designed based on '5C' i.e. Compact, Contemporary, Cutting-Edge, Customized and Collaborative to match the dynamic industry demands.

GSFC University has taken a number of initiatives in the last one year for holistic development and grooming of students who have an enquiring mind & willingness to learn and apply academic, scientific, research and innovative skills.

GSFC University has garnered much larger support during the year from other PSUs in addition to its promoter Gujarat State Fertilizers and Chemical Limited (GSFC Ltd. – a joint sector company of Govt. of Gujarat) in its mission to develop a Human Resource and talent equipped with the necessary skills to meet demands of the industry. GSFC University is continually getting the support of Thought Leaders from Government, Industry, Academia, Research and Developmental Sector for its Governance and development that is aligned with Nation development, meeting the regional needs and meeting global challenges for humankind.

As you know that the core idea that differentiates GSFC University is that we believe in the holistic development of our students and provide them with real-life skills instead of just a qualification. Our educational strategy is not limited to classroom learning. We hope to hone our students to become not just educated but become confident young Indians who can take our nation forward. We believe that a student must develop critical reasoning ability and must have good communication skills. Armed with these two abilities, a student will not only be able to perform well in the domain of expertise but will also be able to deal with whatever future challenges life may pose.

In addition to these core qualities, a new age student also requires the ability to deal with emerging technologies and creativity to solve real-life problem statements through innovation.

We have covered all these bases by orienting our educational process towards more hands-on learning than verbal teaching so a student is forced to think and reason on his own and understand a subject instead of falling prey to rote learning.

We have also introduced modern technological tools that expose students to new mediums of knowledge-sharing and learning so a student develops a better understanding of the subjects he is learning and is also more aware of the emerging technology trends. As we enjoy autonomy in introducing new subjects and have the resources to afford new technologies, our student remains updated and aligned with the rapid changes that are happening all around us today.

As we are a university founded by a joint sector undertaking of the government, the USP of GSFC University is its industry connect as it allows us to access industrial resources and also understand skill-requirements of the industry.

This advantage has allowed us to help students constantly remain aware of the demands of the industrial sector and be exposed to the disciplined work culture critical for industrial employment.

We at GSFC University follow a unique Medical College model for imparting practical hands-on experience in all its streams. Here at GSFC University, a student is expected to go through a mandatory one month industrial internship in each semester break except for the first year. In the first year, every student is required to undergo a mandatory Foundation Course aimed at imparting various soft skills essential for any profession, apart from ensuring a smooth transition into the higher education system.

Due to direct connection with large industry, our students enjoy a great advantage in accessing better industrial internships and ultimately better employment opportunities on qualifying. To strengthen this further, GSFC University has also forged strong relationships with other more than fifty (50) industries located in the vicinity and hence enlarged the pool of opportunities for its students.

In addition to the academic edge, our university also enjoys the advantage of being housed in a lush green and well secured GSFC campus that is not just eco-friendly but also a girl-friendly environment. The location is ideal for students and faculty to pursue their education, research, and innovation-learning with access to one of the most advanced facilities of Science, Engineering and Management in its backyard.

As holistic development of mind and body of the student is our main goal, we are also committed to develop one of the best student life for our students through technical, cultural and sports and athletic activities on campus. We are also giving lots of encouragement to our students and faculty for participative activities to write their research proposals for the pursuit of new knowledge and innovation.

I would also like to mention recent developments that are taken up to expand the academic programs offering and strengthening our interdisciplinary research by introducing a Choice Based Credit System (CBCS) from the current academic year.

GSFC University has introduced two new academic programs in Science namely MSc in Chemistry and in Biotechnology. Further, we are now offering two new B. Tech degrees in Computer Science & Engineering and in Fire & SHE.

MSc in Chemistry and in Biotechnology are introduced with an objective to meet the demands of chemical, pharmaceutical and allied industries and inculcate strong research in the area of Chemistry and Biotechnology.

The Engineering Program of Fire & SHE is the result of consistent demand coming by regional and national companies where health, safety and environment are now given utmost importance and there is a lack of quality manpower.

The Computer Science & Engineering program is now an essential need for the Science and Engineering field with its application cutting across all sectors and becoming part of all functions of life.

It is also important to note that Computer Science & Engineering program will also offer specializations in Artificial Intelligence and Big Data as well as in IoT and Machine Learning (ML) to develop relevant

and future-ready human resources for IT and technology companies. This program is also supported by the Department of Science and Technology, Government of Gujarat.

The University has also introduced Ph.D. programs in Sciences to strengthen its research and innovation initiatives.

The University has also initiated a process to reach out to international institutions to create the opportunity for its students for international education exposure in the countries like USA, Canada and Australia to name a few.

We have also initiated Skill Development and Executive/Management Development program for the industry as well as a program to inculcate Entrepreneurship Skills among our students and faculties.

Moreover, I would also like to express my sincere gratitude towards GSFC for its wholehearted and unstinted support for GSFC University. We are also grateful to other GoG companies and a host of private sector companies for extending their valuable support in our pursuits and want to assure one more time that our university is now shifting gears to move in the direction of becoming the Institute of Excellence in Science, Engineering and Management.

Looking forward to your valuable inputs and support.

Message from Provost's Desk

Dr. Nikhil Zaveri

Provost (Vice Chancellor)
GSFC University



It gives me immense pleasure to mention that I am very much elated to be an integral part of the GSFC University family. The dynamic vision of the Hon'ble President of the University envisaging the Institution to be a "Compact" and "Boutique" University intertwined with his noble mission of imparting the inimitable education to the students makes me excited to evolve a series of innovative initiatives in the years to come. He is aptly describing this University as a "Signature University" where thrill for exploring and joy of learning is celebrated.

At GSFC University, I, along with my esteemed team members, am committed to provide the learners with broad-based multidisciplinary education embracing knowledge, skills, attitude, and values with meaning and satisfaction. We will ensure proper coherence of the entire value chain of the ecosystem in such a way that will facilitate fructification of new knowledge and foster fruitful innovation. Certainly, the University will play a pivotal role for the students as well as faculty enabling individual accomplishment with intensive engagement leading to the fulfillment of the national agenda of a socially sensitive skilled nation. Under the motto of "Education Re-envisioned", we will have a number of dazzling drive which will tinker the curiosity of the students followed by number of outstanding initiatives which will back their quest.

The courses offered by GSFC University not only enable the students to develop a gamut of skills but also apply them to real-world problems, thus fast-tracking their careers. The processes of teaching, training and evaluation follow the modern teaching system which makes the education system at GSFC University in sync with the latest trends in technology and commerce. Education, thus, rather than being lecture oriented, didactic and traditional, is more student-driven.

The four different Schools and streams of GSFC University ensure that the students are not only polished but also carved to face the future. The schools under the umbrella of GSFC University are not just normal streams, but they are also the only finishing schools of their kind in India. It is not about merely teaching etiquette, but it's about making them 'industry-ready' to face the challenges placed before them in the dynamic corporate environment, thus bridging the gap between education and the industry.

We recently started two new academic programs in Science namely MSc in Chemistry and in Biotechnology. Further, we are now offering two new B. Tech degrees in Computer Science & Engineering and in Fire & SHE. As the Computer Science & Engineering program is now the base of almost all the fields across, we are planning to extend it by offering the specializations in AI, Big Data, IoT and ML to develop pertinent human resources.

At GSFC University, we have 22 numbers of Students' Managed Clubs which have been managed by the students thoroughly on all accounts. Participation in student clubs is an integral part of the University. Each club needs to have a minimum of 20 members. Club activities are intended to develop leadership, self-discipline, management and soft skills. Participation and good performance in a club will earn a student credits under the Activity Credit Bank – a unique initiative to the holistic learning approach.

Let us come together and participate in this engaging process of education which will develop multidisciplinary capabilities focusing on the-most-sought-after versatility of critical thinking with effective communication, and problem-solving with creativity carrying the essence of enterprise and the spirit of service.

I wish all the best to all in the future endeavors.

From Editor's Desk

Ms. Sneha Bajaj
Chief Editor - 'Eventia'
GSFC University



It is with profound pleasure and humility we are back with our second issue of the digital newsletter 'Eventia'. The current issue covers the in-house and outhouse activities of GSFC University during February and March 2020. The topics covered in this issue include quantum computing, waste management and green activity, women and cybercrime, finance and investments and social responsibilities and humanity.

I know the current time is totally stressful and uncertain, but every cloud has a silver lining and the same way we are sure to come out of this situation by 'Staying safe at home and have faith over fear'. I take an opportunity to congratulate the students and my colleagues of GSFC University for transforming themselves to the call of the time and making our online classes ONTI-2020 and online exam ONEI-2020 a grand success. We are the waves of the same sea and I am sure we all will sail through of the crisis very shortly.

I would like to convey my gratefulness to all the entire editorial team for their sincere and honest work and dedication that has made this issue of the Eventia possible. Kudos to all.

I wish you all Good Luck! Please, do look after yourselves, your families and stay safe.

With Best Regards,

Ms. Sneha Bajaj

Chief Editor – 'Eventia' & Assistant Professor GSFC University

Glimpses of Activities at University

Dr. Chetna Parmar
Editor SoM - 'Eventia'
GSFC University



Mr. Abhijit Srivastava
Editor SoF&S - 'Eventia'
GSFC University



Ms. Priyanka Pandya
Editor SoT - 'Eventia'
GSFC University



Dr. Saroj Shekhawat
CEO – GUIITAR
GSFC University



School of Management

Activity: 1 Industrial visit

An Industrial Visit has been organized on 7th February, 2020 at GVK EMRI - 108 Ambulance services - Ahmadabad for BBA students. 70 students along with two faculties i.e. Ms. Vimla Virparia and Mr. Dushyant Gaekwad took an active part in the visit. It was a great learning for all.

Marketing research is "the process or set of processes that links the producers, customers, and end-users to the marketer through information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications. BBA Third year students presented the company's marketing research of the various companies. INTEL, Lego, Mc Donald, Cadbury, Amul and many more.



Activity: 2 Mock Interview

Mock Interviews conducted during 4th Feb 2020 to 14th Feb 2020. Students were actively participated and interested in interview. A mock interview mirrors an actual job interview. It gives an opportunity to know what to say and do during an interview and get feedback. Whether it's face-to-face, online, or through a webcam, a mock interview is useful in reviewing students' answers to common interview questions and assessing other factors. Students have given a mock interview will show your strong and weak points and boost your self-confidence.



Activity: 3 Placement

In School of Management, Placement cell has conducted interview in LCS Services India Pvt. Ltd. They have selected three BBA final year students. In the marketing department Ms. Vanshika Dolia & Mr. Nisarg Patel were selected and HR department Harsha Yuvraj.



Activity: 4 Youth Festival

Association of Indian Universities is a society actively engaged in the growth and development of higher education. In the 35th West Zone Youth Fest, 46 Universities participated from 3 States namely Gujarat, Maharashtra, and Rajasthan. Out of 46 major participation was from state of Gujarat with 23 Universities, 2nd was Maharashtra with 15 Universities followed by Rajasthan with 8 universities. Total number of events were 27 including music, dance, literary and fine arts. 35 students of GSFCU participated in 23 events. Ms. Saloni Shah (SYBBA) won 3rd prize under fine arts event mehndi competition.



Activity: 5 BBA Baazigar

The BBA Students' Association of MS University had organized the 13th season of BBA Baazigar, where more than 80 teams had participated from Ahmedabad, Vadodara, Surat and Anand. In School of Management two teams were participated, and 14 students were actively participated and made goof profit.



School of Fire & Safety

Activity: 1 Airport Authority of India (AAI) Visit

On 13.02.2020 Mr C. P. Doshi - Dean SoFS, Mr A. Srikrishanan – Asso. Dean SoFS, Mr. Abhay Purndare - Adjust Pro. - SoFS along with eleven students of B.Tech Fire & SHE visited AAI firefighting facilities. Mr. Subhash Chander, Manager (Fire Services), AAI & his team explained in detail about the facilities through PPT & by arranging demonstrations. Further he has shown & explained in detail about all fire facilities available with them.



Activity: 2 CPR & Fist Aid Training

Bankers Heart Institute was invited to conduct a training program on “Life Safety” covering CPR & First Aid on 12.02.2020 at SoT Auditorium. Faculties and Students of GSFC University had participated actively. All participants did practice CPR technique.





Activity: 3 Three days short term course by CSIR-CBRI, New Delhi.

A three days short term course conducted by “CSIR-Central building Research institute, Roorkee” from 11 November to 13 November, 2019 at New Delhi. One faculty named Mr. Abhijeet Shrivastava, TA, SOFS, GSFCU along with two students of B.Tech (F&EHS) 2019-23 batch namely Ms. Radhika Bakshi and Mr.Rishi Gadhvi took part in the course successfully.

The participants were sponsored by the GSFCU.



Activity: 4 Workshop on Safer Equipment

Workshop on safer Equipment was organized at School of Technology on 22/11/2019. M/s MSA (India) Ltd. was invited for the purpose. The following representatives form M/s MSA were present.

1. Mr. Radha Krishnan Regional Customer Marketing Manager (Respiratory & Fire Protection)
2. Mr. Saurabh Meghare (Manager-Sales)
3. Mr. Kishor Mule (Sales)
4. Mr. Ashish & Mr. Rajesh (Royal Electronics Sales & Services, Vadodara)

They explained in detailed about the importance of PPEs like respiratory & non - respiratory equipment. They responded to the queries from the participants satisfactory. The students of B.Tech Fire & SHE along with all persons from SoFS took active part in the workshop.

All the participant expressed their full satisfaction about the workshop.



School of Technology

Activity: 1 Sherlock (Treasure hunt)

Description activity/participation: Sherlock is basically Treasure Hunt, in which we have to reach the final clue.

The game was divided into 4 rounds:

Round 1: Quiz of sense of humour and aptitude.

Round 2: 2 clues were given and we have to match the emoticons.

Then 2 teams with the same emoticons have to play 2 physical tasks against each other.

Round 3: We have to identify 6 places from the clue given one after the other.

The 2 teams which reach the last clue first was selected for the final round.

Round 4: There were 5 murder mysteries given which we have to solve.

1) Name: Aneri Nagrashna Roll No.- 18sc01119 Mobile No. - 7359939446 Discipline- Bsc Chemistry semester- 4 Email id- 18sc01119@gafcuniversity.ac.in	2) Name: Riya Patel Roll No.- 18sc01073 Mobile No. - 6353339665 Discipline- Bsc Chemistry semester- 4 Email id- 18sc01073@gafcuniversity.ac.in
3) Name: Sarthak Navapara Roll No.- 16be01012 Mobile No. - 9824369494 Discipline- Btech chemical semester- 8 Email id- sarthak.navapara@gafcuniversity.ac.in	4) Name: Maitrey Delwadiya Roll No.- 16be01035 Mobile No. - 7600012866 Discipline- Btech chemical semester- 8 Email id- maitrey.delwadiya@gafcuniversity.ac.in



Activity: 2 Debate competition

Our Shining Champions: Rutvij Vagadia (B.Tech. Mechanical 5th sem) and Dhrumi Pithadiya (B.Sc. Biotechnology 1st sem)

Name of activity: Debate competition

Held by: AIU youth festival

Held at: Uka Tarsadia University, Bardoli



Activity: 3 Domino (Technext)

Name: Kavisha Sanjaykumar Patel

Roll No: 18BT02030

Mobile No: 9104230293

Discipline: Mechanical

Semester: 4TH Semester

Email id: 18bt02030@gafcuniversity.ac.in

Title of activity/participation. Domino (Technext)

Description activity/participation: Arrange 120 Blocks Using Given Tasks.

Knowledge Concavity Cyber World and Indian Women



Ms. Abhilasha Vyas

Assistant Professor, C.S.E
GSFC University
&

Ms. Veera Patel

Student, Chemical Engineering
GSFC University

Women and the Internet:

In this era of the Internet, everyone has equal access to the internet irrespective of his caste, creed, colour, gender, and nationality. The fact for consideration is that all genders are using services and social media platforms actively. In this process, a huge amount of personal and user identity information is shared across multiple platforms without understanding its impact. This creates easy access to someone's identity and personal information. The availability of such information is increasing cybercrimes. Amongst all the categories of people, the cybercriminals usually target the women of the country as women in India are already very weaker sections of the society (as discussed above). Cybercrime against women is increasing exponentially as compared to traditional attacks.

Cybercrimes against women are increasing day by day. The online platforms are used to challenge women dignity, privacy and security at every moment. Cyberstalking, social engineering, abusing, cyber defaming, and pornography are few of the examples of weapons used against women. Cyber-crime against women is more dangerous than traditional attacks as it affects and harms more emotionally and mentally than physically.

Free access to the internet, men's ego and less education of cyber law are the major reasons for cyber-crime against women. In spite of having lot of portals, helplines, cyber cell for reporting such crimes, not many cases are reported due to fear of defaming and identity leak. The existing cyber laws are not well equipped to handle technology advancement in committing cyber-crimes.

There are no geographical boundaries when using the internet which gives a bigger ground for committing cybercrimes. This also makes cyber-crime difficult to detect, prove or even reporting.

At least one cybercrime was reported every 10 minutes in India in the first 6 months of 2017 and a total of 27000 + cases registered. Growth of cybercrime-as-a-service is a real challenge. There are number of advance technologies easily available for cybercriminals to get unauthorized access to some other account. The cases of cybercrime are not addressed properly. As per the statistics of 2016, NCRB data charge sheets files only for 30% cases.

Government's main policies and organizing training programs for training law enforcement officers to identify probe cybercrimes. There is a number of types of social media cybercrimes against women.

The types of Cyber-crimes that occur are:



Cyber-Crimes and Laws of India:

Most of the cases related to cyber-crime are not registered by girls and as they do not know what steps need to be taken if they go through such situations. IT ACT AMENDMENT 2008 has solved the problem of data theft (under section 43A), identity theft (under section 63C), spamming and phishing (under 66A).

According to this act, no one can steal any kind of personal data, identity or other assets of a person. Besides, IT ACT AMENDMENT 2000 prohibits the publishing of content which is obscene. The law punishes the criminal to at least a year of jail and some compensation amount.

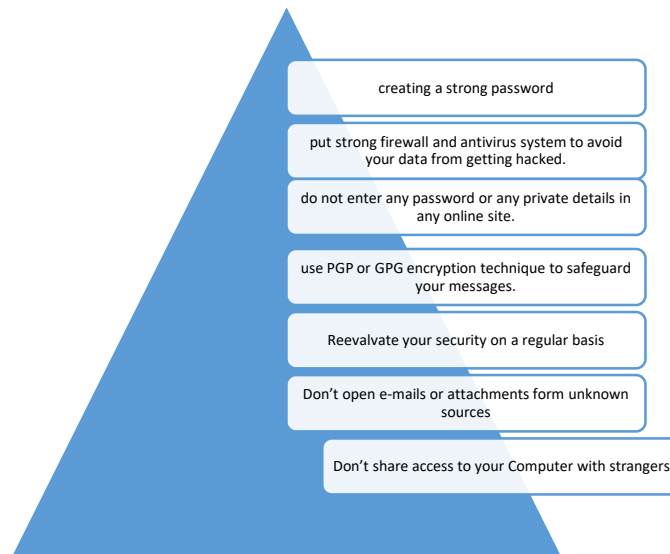
There are special sections like Section 354 D: Stalkers Beware! for cyberstalking, Section 66 C: Hackers, On Your Guard! for hackers who have hacked and stolen some kind of data of the user, Section 66 D: Enough Is Enough, Angel Priya!, Section 66 E: Revenge Porn? Not Anymore! False porn videos etc.

But still, some of the issues like cyberstalking is not getting proper justice. The law ensures the safety of a person online but some loopholes save cyber attackers from the law somehow.

Prevention is better than cure:

As they say, prevention is better than cure, we have some prevention measures that each one of us must take to make ourselves cyber-safe.

A single Antivirus and system protection software can reduce the chances of getting into unwanted cyber problems. Other ways of making yourselves cyber-safe are:



What if you become a Victim?

In case, you come across any situation where you are harassed in some manner on the internet, do not panic. No one has any right to harass you, online or offline. Report your complaint so that you do not go through the same situation again and the one doing wrong is punished. Every district in India has its cyber police station, dedicated completely to cyber-crimes of any kind. They make sure of your anonymity, secrecy and safety. Also, you can report to twitter handle @CyberDost, which is an innovative initiative by the Ministry of Home Affairs which can guide in cases related to cyber-crime and cyberbullying. Ministry of Home Affairs has also taken a footstep toward providing a proper and appropriate platform for the victims of cyber-crime. The central government has also created a platform called digital police which investigates any kind of cybercrime occurred. The Digital Police portal is a Smart Policing initiative of the Ministry of Home Affairs to provide services to citizens and aid efficient Police investigations.

Conclusion:

India is a country where there are a lot of hot topics or most concerned topics to be sorted out first, it could be political problems, border fights, or some kind of controversies, etc. And hence such topics like cybercrime against women are ignored to some extent. The judicial system also works with a very slow rate and hence mostly such cases are not even registered even after reporting to the competent authority. According to the current situation, it is impossible to be completely safe in the cyber world but one can take measures to be cyber safe with the support of government policies or NGOs. The government, NGOs and the citizens have to come together and make proper and strict laws against the cybercrime which are happening against women. Only then, the women will come up and register cases of such crimes. Also, the education system has to be improved where more of moral values and etiquettes should be taught. The next generation should be taught that they need not interfere and damage someone else's name and fame. As of now, social platforms like Facebook, Twitter, Instagram, and others have given the option to report and block any kind of unwanted, or irrelevant content or message on their social media sites. Still many policies and the proper system have to be implemented to be safe from cybercrimes which is a major concern for women.

Quantum Computing New Age of Computing

Mr. Dhairya Patel

Teaching Assistant – Physics
GSFC University



Today Google, IBM and many others are trying hard on new technology that can change the whole computing process and which can be way advanced. No doubt that there's more number-crunching ability in a 21st-century cellphone than you'd have found in a room-sized, military computer 50 years ago. Yet, despite such amazing advances, there are still plenty of complex problems that are beyond the reach of even the world's most powerful computers—and there's no guarantee we'll ever be able to tackle them.

Quantum computers, if researchers succeed in such invention it will possess the ability which is beyond our imagination will help us solve problems, like modelling complex chemical processes, that our existing computers can't even scratch the surface of.

How does a conventional computer work?

Conventional computers can do only two things: (1) They store numbers in memory (2) They process stored numbers with simple mathematical operations (like add and subtract). Both storage and processing—are being done using switches called transistors, which are tiny versions of the switches. A transistor can either be on or off, we can use a transistor to store a number one (1); if it's off, it stores a number zero (0). Long strings of ones and zeros can be used to store any number, letter, or symbol using a code based on binary (so computers store an upper-case letter A as 1000001 and a lower-case one as 01100001). Each of the zeros or ones is called a binary digit (or bit) and, with a string of eight bits, you can store 255 different characters (such as A-Z, a-z, 0-9, and most common symbols). Computers calculate by using circuits called logic gates, which are made from a number of transistors connected together. Logic gates compare patterns of bits, stored in temporary memories called registers, and then turn them into new patterns of bits—and that's the computer equivalent of what our human brains would call addition, subtraction, or multiplication. In physical terms, the algorithm that performs a particular calculation takes the form of an electronic circuit made from a number of logic gates, with the output from one gate feeding in as the input to the next.

What is quantum computing?

Quantum computing uses quantum bits which are called 'qubits' instead. However, unlike a usual bit, they can store much more information than just 1 or 0, because they can exist in any superposition of these values.

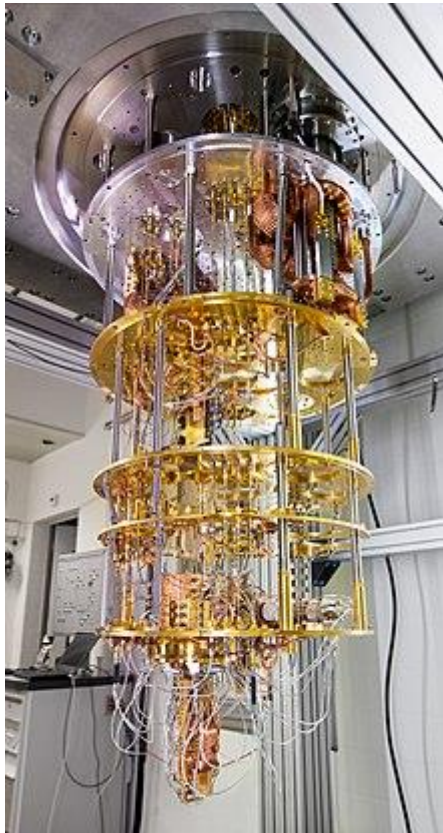
A qubit can be thought of like an imaginary sphere. Whereas a classical bit can be in two states – at either of the two poles of the sphere – a qubit can be any point on the sphere. This means a computer using these bits can store a huge amount more information using less energy than a classical computer.

Let's explore more from scratch.

Quantum theory is the branch of physics that deals with the world of atoms and the smaller (subatomic) particles inside them. You might think atoms behave the same way as everything else in the world, in their own tiny little way—but that's not true: on the atomic scale, the rules change and the "classical" laws of physics no longer automatically apply on them.

If you've studied light, You might know that a beam of light sometimes behaves as if it's made from particles (like a gradual stream of cannonballs), and sometimes as if it's waves of energy rippling through space (a bit like waves on the sea). That's called duality and it's one of the ideas that comes to us from scientific theory. It's hard to understand that something can be two things at once—a particle and a wave—because it's very alien to our everyday experience: a car isn't simultaneously a bicycle and a bus. In quantum theory, however, that's just the type of crazy thing that can happen. The most striking example of this is the baffling riddle referred to as Schrodinger's cat. Briefly, within the weird world of scientific theory, we will imagine a situation where something sort of a cat might be alive and dead at the same time!

What would a quantum computer be like in reality?



In reality, qubits would need to be stored by atoms, ions (atoms with too many or too few electrons), or maybe smaller things like electrons and photons (energy packets), so a quantum computer would be almost sort of a table-top version of the type of high-energy physics experiments they are doing at Fermilab or CERN. Now you would not be racing particles round giant loops and smashing them together, but you'd need mechanisms for holding atoms, ions, or subatomic particles, for putting them into certain states (so you'll store information), knocking them into other states (so you'll make them process information), and deciding what their states are after particular operations are performed. In practice, there are many possible ways of containing atoms and changing their states using laser beams, electromagnetic fields, radio waves, and an assortment of other techniques.

Quantum computer based on superconducting [qubits](#) developed by [IBM Research](#) in [Zürich, Switzerland](#). The device shown here will be inserted into a dilution refrigerator and cooled to under 1 [kelvin](#).

What can quantum computers do that normal ones can't?

Quantum computers operate on completely different principles to existing computers, which makes them rather well suited to solving particular mathematical problems, like finding very large prime numbers. Since prime numbers are so important in cryptography, it's likely that quantum computers would quickly be ready to crack many of the systems that keep our online information secure. Due to these risks, researchers are already trying to develop technology that's immune to quantum hacking, and on the flip side of that, it's possible that quantum-based cryptographic systems would be far more secure than their conventional analogues.

Researchers also are excited about the prospect of using quantum computers to model complicated chemical reactions, a task that conventional supercomputers aren't excellent in any respect. In July 2016, Google engineers used a quantum device to simulate a hydrogen molecule for the first time, and since then IBM has managed to model the behavior of even more complex molecules. Eventually, researchers hope they'll be ready to use quantum simulations to design entirely new molecules to be used in medicine. But the grail for quantum chemists is to be able to model the Haber-Bosch process – a way of artificially producing ammonia that's still relatively inefficient. Researchers hope that if they will use quantum physics to figure out what's happening inside that reaction, they might discover new ways to form the method far more efficiently.

Environment Canthus

Waste Management in University Laboratories- An approach to Green Activity



Ms. Priyanka Pandya
Assistant Professor
GSFC University

Introduction: Improper or careless disposal practices have significant effects on our environment, including polluting water sources, poisoning wildlife, and creating toxic sites which aren't suitable for animal or human habitation. For employees who work with chemicals (and therefore generate chemical wastes) the single most important 'green' activity is conscientious, careful management of chemical wastes. Proper chemical management is necessary to protect the health and safety of the University and surrounding communities and the environment.

Environmental Legislation: The proper handling, transport and disposal of wastes are governed by a variety of legislation. These include:

- Environmental Protection Act 1986: An Act to provide for the protection and improvement of environment
- Air (Prevention and control of air pollution) act, 1981
- Solid Waste Management act, 2016

Types of Laboratory waste:

Liquid Waste streams:

- Unused and surplus reagent grade chemicals
- Intermediates and by-products generated from research & educational experiments
- Spent solvents - including water based
- Mercury containing items
- e.g., Normal municipal waste, recyclable waste, chemical waste

Solid Waste Streams:

Solid waste includes any laboratory material that has come in contact with a chemical or is potentially contaminated with a chemical. Examples include gloves, bench-top paper, weighing boats and papers, paper towels, clean up material and permanently contaminated glassware and plastic ware. e.g., Normal municipal waste, recyclable waste, broken glasses, chemical waste, electronic waste

The laboratory waste can be characteristically hazardous if it exhibits any one of the following characteristics:

Ignitability; Corrosively; Reactivity; Toxicity.

On source waste management:

- Classification/characterization of waste
- Proper packaging/storage of waste
- Effective labelling
- Waste collection for treatment/disposal

Current practice of Dilution and Evaporation

- Dilution of a waste stream (by adding clean water, for example) so that it no longer meets a hazardous waste characteristic (a concentration of a toxic metal, for example) is not allowed. Chemical waste streams must be identified and dealt with at the time they become wastes; typically at the conclusion of an experimental protocol. Dilution is not the solution to pollution.
- Mixing a listed hazardous waste with other waste streams results in the entire mixture becoming a regulated hazardous waste.
- Evaporation of liquid chemical wastes is NOT an acceptable method of disposal. Liquid wastes must be captured and disposed of properly. In addition to being a prohibited practice, the addition of volatile organic compounds (VOCs) to the atmosphere contributes to the generation of harmful ground-level ozone, which is a serious health threat especially in urban areas. It is therefore important from both a compliance standpoint and a public health standpoint to minimize the evaporation of chemical liquids as much as possible.

Strategies for waste management to reduce its environmental impact are:

- Pollution prevention and Source reduction: incorporates the principle of green chemistry
- Reuse or redistribution of surplus materials
- Treatment, reclamation and recycling of materials within the waste: Potential for recovering energy from the waste (e.g., using solvent as a fuel)
- And disposal through incineration, treatment or landfill: Minimizing risk to health and environment, though land disposal of chemical waste is the least desirable method

Conclusion: Proper chemical waste management protects the health and safety of everyone and prevents or minimizes pollution. All generators of chemical waste should do their best to minimize the amounts of chemical waste they generate and recycle whenever possible.

Finvest Chronicle:

Dr. Chetna Parmar

Associate Professor – SOM- GSFCU
GSFC University



“Budget gives Indian economy an impetus to emerge as more vibrant and stronger”: - said by Union Finance Minister Nirmala Sitharaman

In Feb 2020, the Budget was released. It had a huge impact on the trading and investment front. The day the budget was announced, there was a negative impact on intraday trading.

2019 was a challenging year for the Indian economy as it faced both external and domestic headwinds. On the external front, the uncertainty due to the trade conflict between the US and other countries, especially China was the aspect to worry. On the domestic front, we had different issues like a slowdown in discretionary consumption, drop-in auto sales, the financial position of NBFCs, and low growth in aviation traffic, weak industrial production, falling capacity utilization. Economic predictor said that this slowdown was mostly attributable to cyclical factors and the future will out of the bottom.

Inflation rising 92bps in November 2019, Consumer Price Index (CPI) rose further to 7.3% in December 2019, up 181 m-o-m. The supply of vegetables especially onions has improved in February 2020.

IIP for November 2019 turned slightly positive at 1.8% after contracting for the previous three months. The uptick was broad-based with mining and manufacturing both growing by 1.7% and 2.7% respectively but electricity contracted by 5%.

INDEX PERFORMANCE – NET RETURNS

% Change in Indices	Oct - 19	Last 1 Yr
S&P BSE SENSEX	3.78%	16.51%
NIFTY 50	3.51%	14.35%
S&P BSE Auto	13.03%	-4.71%
S&P BSE Bankex	3.15%	19.62%
S&P BSE Capital Goods	0.68%	40.49%
S&P BSE FCMG	4.07%	10.05%
S&P BSE Consumer Durables	3.94%	-10.05%
S&P BSE Healthcare	5.89%	-10.17%
S&P BSE Metal	2.42%	-25.70%

S&P BSE PSU	7.98%	1.56%
S&P BSE Oil & Gas	7.46%	18.78%
S&P BSE IT	-1.77%	5.92%
S&P BSE Reality	4.29%	22.81%
S&P BSE Smallcap	2.94%	-4.53%
S&P BSE Teck	-2.51%	3.14%

Sources:Sebi,NSDL,BSE,NSE,CRISIL Research

Due to the virus hits in the Chinese market and impact on the exports, the shares of some of the pharma firms have jumped up to 110% as market participate. Few companies' shares like Shilpa Medicare, Gujarat Themis, Solara Active Pharma, Granules India, Wanbury and Wackhardt have gained over 40% in the last 50 days. As analysts see a slightly used delayed impact of the supply crunch from Chinese as drug firms have inventories till March. People were expecting the situation in China to normalize by mid-February, but that has not happened. Prices of Paracetamol, the most commonly used analgesic, have jumped 40% in India, as pharma companies are facing challenges in securing supplies of critical raw material for paracetamol intermediates, which can only be sourced from central China.

On the global front, the IMF expects the global economy to grow at 3% in 2019, down from 3.2% in its July 2019 forecast; it was impacted by the US-China trade war. Besides, the World Trade Organization slashed the 2019 global trade growth forecast to 1.2% from 2.6% predicted in April 2019.

Britain and the EU finally reached a Brexit deal after several sounds of negotiations. The UK will be allowed time to have a general election ahead of Brexit and may leave the EU on the 1st of any month until that date once the withdrawal agreement is ratified in both the Westminster and European parliaments in the meantime.

Culturing Innovation

GUITAR - GSFC University Incubation, Innovation, Technology & Applied Research Centre



Dr. Saroj Shekhawat
CEO – GUITAR
GSFC University

The 'National Student and Faculty Startup policy 2019' (NSFSP) is a guiding framework to envision an educational system oriented towards start-ups and entrepreneurship opportunities for student and faculties. The guidelines provide ways to Indian Higher Education institutes (HEIs) for developing entrepreneurial agenda, managing Intellectual Property Rights (IPR) ownership, technology licensing and equity sharing in Startups or enterprises established by faculty and students.

GSFC University Innovation Incubation and Technology Applied Research Centre (GUITAR) is developed as the central hub of Innovation and entrepreneurship at the GSFC University keeping up with the Govt. directive and GSFC Management Vision of a pragmatic education policy.

The projects under GUITAR are focused on solving the problems in the areas of Green & Sustainable Energy, Solutions for Agriculture sectors with Drone Based Projects in addition to developing Apps with social relevance designed to improve quality of life. To stimulate and support the academic environment for innovation the GUITAR offers classes, mentorship, guidance and resources tailored for our young student entrepreneurs.

GUITAR conducted a **3-Day Workshop** for students on “**Robotics & Home Automation**”. Students were trained in programming as well as assembling of basic Robot building their own circuits and run the robots.

A competition was held at the end of the workshop in which students were asked to make a Bluetooth controlled robot which can be controlled by a single key. All the students participated in the competition and three teams secured 1st, 2nd and 3rd place.

A trip to Gujarat University start-up and Entrepreneurship Council (GUSEC), Gandhinagar was conducted to connect the GSFCU students to the regional innovation incubation hubs and help them understand the start-up process through start-up success stories.

An “**Idea Junction**” competition has been launched to create a platform for students where they can experiment with their ideas, and seek guidance for the implementation of those ideas. The “**Idea Junction**” will conduct various workshops/seminars throughout the year focusing on entrepreneurial skills of the students. Following two workshops were held recently:

1. Creative Thinking for Business Potential
2. Innovative Idea Generation & Opportunity Perception

GUITAR is working continuously with the mission of igniting debates and discussions around Innovations which in turn would manifest in student entrepreneurial success.







Lesson to Learn

Corporate Social Responsibilities (CSR)



Ms. Sneha Bajaj

Assistant Professor – English
GSFC University

How many of us crib, complain or criticize about the things we have or about the things around us? I am sure your outlook will change when I will share our (Ms. Shivani Joshi and mine) experience of the internship at HMDC – home for Mentally Differently Abled Children, Vadodara. We are happy to get this opportunity to explore the whole new world of mentally differently-abled children.

About HMDC

GES (GACL Education Society) has adopted HMDC – Home for Mentally Differently Abled Children, located in Karelibaug, Vadodara, on Public-Private Partnership (PPP) model from the Department of Social Justice and Empowerment, Government of Gujarat.

It is home to destitute and orphan mentally differently-abled children. GES is managing and operating it. The institution has been refurbished with a state of art facilities for several developmental activities which will provide help the inmates to skill themselves to live a life, with the least support from society. Trained staff has been engaged to provide them the environment of love and care.

HMDC plays a vital role in the lives of around 50 mentally differently-abled children by providing them academic and vocational education and shelter along with the food. Most importantly, it gives emotional support to the children in the form of caring teachers and “House Fathers” along with the staff. After an initial visit to HMDC, we decided to work on this particular group as it gave us a heart-churning thought of doing something for them.

Internship Experience

Every experience of life teaches us something and this was such an experience we can never forget during our lifetime. It was one such experience of life where we not only learn something but became grateful for what we have and that made us more humble and more human. First of all, we learned to observe the things, the children, and their behavior in a way they react and respond. It was an emotionally squeezing experience for us as we need to first digest their incapability, accept them as how they are and make ourselves ready to help them without feeling pity for them. It was quite a patient work to notice them, observe the methodology of teaching and grasping the way we should behave with them; but fortunately, with the help of a class teacher – Mr. Jitendra Chauhan, we were able to understand and grasp the manner in which we need to deal with them. We were amazed to see the way he maintained the information about the students, their likes-dislikes, their abilities, and their development. He also introduced us with personal attributes of every child and their potentiality on which we can work and polish it. We found the different levels of all the children where we needed to work and enhance their capabilities. We would always be appreciating the support of the teachers and the House Fathers who ensured that we were never alone with all boy students as they don't

understand the social behavior and gender limitations. They taught us the techniques to deal with some special students who had a very special habit and who used to react to some special colours and special words.

On the whole, it was a remarkable to know the world of these special children and happy to be the part of it. During our experience, we found that many children among them are excellent in their potential power in their own way; if we sharpen their skills, they can outstand in the future. Let's be the part of their unique world and be a true educationalist. As someone has rightly said, "the goal of education ... when it finds its most effective methods, education will be almost uniquely relevant to the task of setting up and maintaining a better way of life."

Extra-Curricular Activities – Students Managed Club

Ms. Shivani Joshi

Teaching Assistant – English
GSFC University



GSFC University encourages the Students Managed Club activities with a view to bringing out the hidden potentials of the students and enhancing their soft skills. The brilliant students of the University also never miss the chance of Grabbing opportunities for achievements. I am very glad to share with you all about the activities taking place at the university.

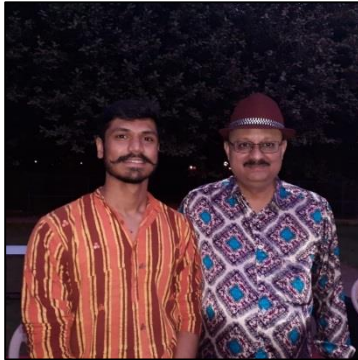
ON-CAMPUS ACTIVITIES:

Name of Activity: Pre-Republic Day Celebrations - Patriotic Song Competition

Date: 25 January 2020

Club Name: Event Management Club

Details: There were Group Participations of students as well as Solo participations from various classes. Mr. Brij Joshi and the group was invited to play the orchestra. They also taught and guided the students for participation.



Name of Activity: Republic Day Celebrations - Participation in Cultural Program at GSFC Ltd.

Date: 26 January 2020

Club Name: Cultural Club

Details: Our 18 students performed the dance during RD Celebrations at GSFC Ltd.



Name of Activity: Exhibition - Photography Club

Date: 26 January 2020

Club name: Photography Club

Faculty Coordinator: Dr. Vaishali Shah

Details: During odd semester three competitions from the photography club were announced - Short Film making, Mobile Photography and Camera Photography; all the competitions were pre-led by the workshops respectively. During the exhibition- all the entries were displayed, exhibited and inaugurated by President Shri P K Taneja at the SOT Ground Floor. The winning short film was shown to all in the SOT Auditorium.

Name of Activity: Heartfulness Sessions

Date: 9-21-24 January 2020

Details: The 11 sessions of Heartfulness were proposed and they are being taken place time to time since October 2019. The last session will be on 11 February 2020.



Name of Activity: A Talk on “Cancer Awareness: Perspectives for a Healthy Lifestyle”

Date: 4 February 2020

Club Name: Aarogyam Club

Expert Invited: Dr. Ghanish Panjwani- Consultant Surgical Oncologist, Sterling hospital

Faculty Coordinator: Dr. Akhilesh Prajapati, Dr. Rajni Pania, Dr. Ankit Sudhir

Name of Activity: A Seminar on “World Day of Social Justice”

Date: 20 February 2020

Club Name: Community-minded Club

Expert Invited: Adv. Asuthos Raj Pathak, Adv. Komal Kukreja, Adv. Neelam Patel





Name of Activity: Celebration of 49th National Safety day – Theme: "ENHANCE SAFETY & HEALTH PERFORMANCE BY USE OF ADVANCED TECHNOLOGIES"

Date: 4 March 2020

Club Name: - Done by School of Fire & safety, GSFCU

Expert: Mr. CP Doshi, Dean- SOFS



Outside The University Campus Activities & Achievements:

The students also participated in various competitions outside the campus and shine out bright and bagged the championship at various levels.

Our Shining Champion: Mr. Meet Khunt – Third Year Chemical Engg., Mr. Nishith Patel & Mr. Abhimanyu Raot - Third Year Civil Engg.

Achievement: Winner – The Most Popular Short film of Campus

Event – 24 Hours film making Challenge

Held by: M. S. University, Vadodara

Held on: 1st week of January 2020

Details: The students shot the film titled – “Zubaan” in 24 hours. The Winning prize was Redmi note 8 - 4 Gb Ram 64 Gb Memory. You can see the film following the link:
<http://m.helo-app.com/al/QwUSsdbwv?c=wa>

Our Shining Champions: Mr. Samarth Patel, Ms. Jahanvi Sharma, Mr. Rajat Maheshwari, Ms. Nidhi Patel, Mr. Devendra Tiwari, Ms. Mitali Patel – Second Year - BBA

Achievement: Winners of the JUNK TO JEWEL (Installation) Competition

Held by: Parul University

Held on: 24 January 2020

Other details: Topic was “Past, Present and Future”

The Prize winning creative by the students is:



Our Shining Champion: Ms. Radhika Bakshi, First Year F&SHE

Achievement: 1. Winner – The Best Debate team

2. Winner – The Best Debater - Individual

Event – Eureka 3.0

Held by: Institute of Advanced Research, Gandhinagar

Held on: 30-31 January 2020

Other details: Topic for 1st round: Is Manned Space Travel worth the Cost?

Topic for 2nd round: Should Social Media Accounts Be Used for Admissions, Police Investigations and Hiring Employees

Our Shining Champion: Mr. Samarth Patel – Second Year - BBA

Achievement: Secured 2nd Position in SPOT PHOTOGRAPHY

Event – PARVAAZ Media Fest

Held by: Navrachna University

Held on: 1-2 February 2020

Other details: Topic was “Architecture”

The Prize winning Photographs by Samarth are:



Our Shining Champion: Mr. Siddharth Notani BSc Chemistry Sem – IV & Mr. Adnan Patahan – Chemical Engg.

Achievement: Winner – Sherlock Treasure Hunt

Event – Prakarsh XV

Held by: SVIT

Held on: 5-6 February 2020

Other details: Won case prize of 1000/- Rs. And ISTE Certificate



Our Shining Champion: Shrestha Kashyap

Achievement: 2nd Prize at state level Biosciences Fest

Event: BIOCALYX

Held by: St. Xavier’s College, Ahmedabad

Held on: 22 February 2020

Other details: -



Our Shining Champion: Piyush Makkar & Meet Somani – CSE 1st year

Achievement: 3rd position

Event: TechFest - C/C++ programming contest

Held by: MS University

Held on: 22 February 2020

Other details: 1 round consisted of few puzzles and for solving each puzzle successfully they got a program to code. In the second round, it was a treasure hunt and 10 programs and 3 round had one question related to programming. For round 1 there were 70 teams out of which 14 qualified for the round. And for the final round (i.e. round 3) 4 teams were qualified out of which 3 teams were of MSU 3rd year and 1 team was our 1st year students. In which our students secured 3 position in the final ranking.

Our Shining Champion: Mr. Kathan Vaidhya – Mech Sem - VI

Achievement: 2nd position

Event: EMPLOI MONDE – at Techkshetra, a national level techfest

Held by: Polytechnic, MS University

Held on: 14-15-16 February 2020



National Cadet Corps – Unity & Discipline

The **National Cadet Corps**, the youth wing of Armed Forces, is open to school and college students on voluntary basis. National Cadet Corps is a Tri-Services Organization, comprising the Army, Navy and Air Wing, engaged in grooming the youth of the country into disciplined and patriotic citizens. The Cadets are given basic military training in small arms and parades. The students of GSFC University are also shining out there. Our students went under a tough competition to secure their place in open seats of Air Wing- NCC in the year 2015, 2016 & 2017. Working hard during their NCC training, the students attended many camps, participated in various competitions and bring us the pride. For the academic year 2019-20, we have had Col. Pankaj Tuknait, C.O. at 1 Technical Compo BN from Army wing during Foundation Course who enrolled the cadets after conducting their interview. Our students have been performing well and grabbing the best of the opportunities. Here, I would like to share with you about all the cadets of our university.

Cdt. Arunansh Gupta – B.Tech Mechanical (Passed out batch)

Cdt. Rudransh Dudhreja – Fourth Year BTech Mechanical

Cdt. Meet Jain – Third Year BTech Mechanical

Cdt. Dhirendrasinh Gohil - Third Year BTech Mechanical

Cdt. Kirtan Chandodwala – BSc Chemistry Second Year

Cdt. Veera Patel – First Year BTech Chemical

Cdt. Divyani Patro – First Year BSc Chemistry

Cdt Ashi Singh – First Year BSc Biotechnology

Cdt. Aman Yadav – First Year BSc Chemistry

Cdt. Yashkamal – First Year BTech F & SHE

Cdt. Amol Jadhav – First Year BTech F & SHE



GSFC
UNIVERSITY
EDUCATION RE-ENVISIONED

GSFC University, Vigyan Bhavan,
P. O. Fertilizer Nagar,
Vadodara-391750, Gujarat, INDIA
T: 0265 – 3093740
: For Feedback kindly mail us at:
feedback.newsletter@gafcuniversity.ac.in

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