MIIC

Annual Report 2021-22 | The Mech Chronicle

ESTD: JUNE 2019

Started & Managed by Students of Mechanical Engineering, MSU Baroda

REDEFINING POSSIBILITIES

Let's walk together towards infinite opportunities

3 celebrating foundation year

BUILDING ON TRUST & BELIEF

TOKEN OF APPRECIATION
MR. BHAVIK KHERA
Managing Director (MD),
SEE Linkages Pvt. Ltd.

FOREWORD BY
DR. GNANVATSAL SWAMI
Mechanical Engineer &
BAPS Swaminarayan Sanstha

TOKEN OF APPRECIATION
MR. MANISH KOTHARI
Managing Director (MD),
Rhino Machines Pvt. Ltd.

THE MECHANICAL INDUSTRIAL INTERACTION CELL

COVER STORY

REDEFINING POSSIBILITIES

Students are always told to do things quickly and be fast in everything as if being fast is always the right way ahead but has anyone thought much about quick approaches being the right way? The cover photo of third edition of The Mech Chronicles in a quick glance shows a drill machine and a screwdriver but on a patient viewing of the photo can depict a lot more meaning.

The cover idea was conceptualized to show a manual tool like screw driver and a power tool like drill machine being equally important in building rocket, one of the most complex machines of engineering. Drill machine is a power tool requiring less effort and time to finish its work. What students are told that this is what they have to be in order to succeed. However the delicate screws in intricate rocket parts can never handle a drill machine. Only a screwdriver can fulfill the job here of delicately controlling hidden screws and fixing them just rightly. In this dog-eat-dog competitive world, students are forgetting that they just have to be the best version of themselves instead of a version idealized by external entities. In a world full of drill machines, screwdrivers will still hold equal power in the society. Rockets can not be made by drill machines, they are made by drill machines & screwdrivers coming together and working in unity while individually being aware of what they bring to the table & how it has to be the best.

Once one is aware of what they are and be proud of it, that's when threads are tightened and possibilities start getting redefined and hence we keep on working together to enhance individuality and reminding them that with right tools, not even sky is the limit!

COVER STORY

Shishant Asnani,
Vatsal Patel

SPECIAL THANKS

Tarisha Patel, Pujan Patel,
Samkit Kothari

REPORT DESIGN

Hiren Parmar, Manthan Patel,
Bhavin Shiroya

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[1]
FOREWORD

For **MIIC (Mechanical Industrial Interaction Cell)**, a voluntary Student Organization at MSU Baroda,

As a person from the mechanical domain, it feels excellent knowing different inventions and creations that surround us and that will surround us in near future. Be it from automation in industries to automation in home appliances, every action is accomplished in a blink of an eye. But the basics are unaltered.

I was happy to know that young lads of the Mechanical Engineering Department at The Maharaja Sayajirao University, Baroda are planning and trying to adapt to the role of entrepreneurs through MIIC|Mechanical Industrial Interaction Cell.

Listening to its activities of bridging students to corporate and vice versa is praiseworthy. Arranging sessions to develop soft skills and mental stability with spirituality is essential in this competitive era. A big congratulations to this voluntary team.

Best wishes to the organization for its future endeavours.

Dr. Gnanvatsal Swami
Mechanical Engineer &
BAPS Swaminarayan Sanstha

[2]
PRAISE FOR THE CELL

I am gratified to know that MIIC is successfully bringing out their third annual report for the academic year 2021-22. Good things remain good only because they are always scarce. I am glad to pen this wonderful note as an appreciation of the commendable efforts put forth by the MIIC team. The efforts taken to bring about the activities carried out in the last academic year and innovative content are appreciable. This report reflects the positive and imaginative energy of our mechanical students in order to show to the outside world, and also to remind the denizens of the Mechanical Engg Dept, FTE MSUB. I take the opportunity to congratulate and thank all the students, coordinators and teachers of the Dept who have made untiring efforts to bring out this annual report. I wish MIIC all success in years to come.

Lt. (Dr.) Piyush P. Gohil
Head, Mechanical Engg. Dept - FTE MSU Baroda

MIIC has been one of the first student associations that have plugged into this experiment. They have connected students with us and experimented with us, with a possibility of co-learning space. Taking the lead and representing the need of students to have connections beyond the curriculum, and connect to the real world, which perhaps an academic institute may find difficult with all its multi-activities, MIIC is one of the only student organisations with whom we have been working for past 2 years who represent the student's interests. I have used their example several times in meetings on how students can also look beyond cultural events, and look at contributing to the possibility of industrial exposure. I would suggest each dept/college to have such forums.

Mr. Manish Kothari
MD of Rhino Machines Pvt. Ltd.

MIIC has made a great start to this initiative by connecting with Industries and organising these Industry Visits. The need of the hour is for the Faculty/Students to understand what the industry needs to upskill, upgrade itself to meet the constantly changing world and migrate to Industry 4.0 with a huge amount of digitisation. We hope that this program is well incorporated as a practice and goes to become part of the credit-earning syllabus for the respective courses to give it the importance it deserves. Kudos to Team MIIC for organising this and best wishes with high hopes that it continues as a habit for future leaders to be exposed to the current and latest trends in the manufacturing spaces in this manner.

Mr. Bhavik Khera
MD of SEE LINKAGES Pvt Ltd

Greetings and heartiest congratulations to the team MIIC for the forthcoming annual report called 'chronicals'. Its a matter of immense pleasure to know that my students are doing commendable job for the last three years as MIIC coordinators
Expert talks,indutrial visits,group discussions etc are some of the activities that team MIIC have organized.these activitues will not only help them getting industry or placement but also inculcate managerial which will have long term impact on thier career path.
I wish they will continue the work with the same zeal in future also. I wish them all the success.

Dr. Dharmendra S. Sharma
Professor, FTE MSUB

I am very happy to see that MIIC has been arranging various activities to groom the students for their better professional and personality development. Such activities should be arranged more frequently and with even higher participation by students. This will definitely help them grow and achieve new heights! My best wishes to MIIC and our own Mechanical Engineering Students for a bright future!

Dr. Jignesh R. Mehta
Assistant Professor, FTE MSUB

The formation of MIIC opened a plethora of activities that could be undertaken for the benefit of the students and the academic development of the department. Since its formation in 2019, MIIC has been instrumental in organizing many industrial visits, curricular, co-curricular and extracurricular lectures, workshops, and training programs. It has widely helped in nurturing stronger ties with industries for the Dept. The coordinators of MIIC have sincerely worked with firm determination and commitment to attain the goals set for the cell. The students in various years of the undergraduate program have also participated enthusiastically in all programs organized by MIIC making them very successful. I appreciate and congratulate the team of MIIC and urge them to continue the good work and build upon it. As a Faculty member of the Dept, I extend my wholehearted support and encouragement for the cell.

Dr. Aakash Pandey
Assistant Professor, FTE MSUB

The activities done by MIIC are highly appreciated and worth noting. The activities conducted by MIIC over the year like industrial visits, expert talks and mock interviews will all help the student community to grow faster. This will help students to meet the expectations and needs of today's era. MIIC is acting as an inspiration for the new generation. I wish you all the very best with everything that lies ahead of you.

Ms. Sheetal Soni
Assistant Professor, FTE MSUB

"An ounce of practice is worth more than a ton of preaching" - Mahatma Gandhi
"Knowledge comes from learning; wisdom comes from living" - A. Douglas William

The greatest gap in learning for the students of our country has been the lack of practical knowledge and wisdom. Books and lectures have helped in creating rankers but many times they fail to create wonderful engineers. Engineers are one of the most important tools for nation-building. Albert Einstein has rightly quoted that "Scientists investigate that which already is; Engineers create that which has never been."

MIIC is one such attempt of the Dept of Mechanical Engg, FTE MSUB, to bridge the learning gaps of engineering students by providing the wisdom of industrial experts at the faculty doorstep. One more year of our efforts has passed successfully. The MIIC team has done a wonderful job this year too by organizing various guest lectures and industrial visits for the students. I have been a witness to their relentless efforts in the direction of enriching the students learning experience. I wish them great success in all their future endeavours and assure my constant and unconditional support in their activities.

Arvind S. Mohite
Assistant Professor, FTE MSUB

"Keep your dreams alive and understand to achieve anything requires faith and belief in your vision, hard work, determination, and dedication."

Upholding this spirit, MIIC has been working relentlessly to make sure that the students of the Mechanical Engineering Department at FTE, MSU are provided with adequate technical exposure. The entire ISEE team wishes them all the success and good luck in their future endeavours.

Team ISEE
(Industrial Synergy for Electrical & Electronics Engineers)

[3]
INITIATION OF MIIC

[Estb : June 2019]

"The reasonable one adapts itself to the world. The unreasonable one persists in trying to adapt the world to itself. Therefore all progress depends on the unreasonable!" (**George Bernard Shaw)**

The Mechanical Engg. Dept. of Faculty of Technology and Engineering. The Maharaja Sayajirao University of Baroda was doing one of the best placements in perhaps the whole state of Gujarat but it felt a gradual decline since few years. Having one of the best potentials, the students lacked In some corporate necessary skills which need nurturing. Thus, The Mechanical Industrial Interaction Cell (MIIC) was a big step forward in this direction, a very apt initiative with the aim to enhance students' employability potential and bridging the gap between Industries and Academics. Started by the students of the Mechanical Engg. Dept. **(Batch of 2017-21)**. The journey of formation was quite long, mixed with evolution yet fruitful and satisfying in the end.

Initiated, conceptualized & founded by the Department Representative (DR) of Mechanical Engg. (2018-19), **Samkit Kothari** presented an idea for the formulation of a Cell for Training and Internship in November 2018 to the Vice Dean of FTE and Head of Mechanical Engg. Dept, Dr. DS Sharma, whose advice ignited him with a broader concept of idea, evolving to Mechanical Internship Cell in January 2019. With the advice of some prominent teachers such as GD Karhadkar Sir and AB Pandey Sir, this initiative got a new direction. Till April 2019, this whole concept was ready to constitute but cooperation and execution were a challenge which can lead to an initiative failure, if not ensured and thus in April 2019, Class Representative Prathmesh Jadhav, joined Samkit Kothari to take this initiative further, as what mattered was the cooperation and support of students of Mechanical Department. With this dual lead, work has gone fast track.

The problem which was hindering the progress was itself the idea of Interaction with Industries, if implemented officially, will clash the approaches and thus was a deep concern. In June 2019, this was sorted with mutual agreement with the then Training and Placement Officer, Dr. Piyush Gohil Sir who has effectively helped to take this initiative forward and with then Mechanical Training and Placement Coordinators (2019-20) to have a mutual consent while dealing with Industries.

Finally, till the end of June 2019, it was not limited to only an initiative for internship opportunities but the idea has transformed into "**The Mechanical Industrial Interaction Cell**" which was much broader in concept as well as scope and dealt with preparing students of Mechanical Engineering Department for future corporate & industrial world, thus has potential to develop industry leaders in their domains. The idea and concept were finally approved by Dr. DS Sharma, Head of the Mechanical Department whose constant support and cooperation were really useful to take students' efforts and initiative forward. And thus on **27th June' 2019**, history was created. For the first time, a cell with **a unique development model for students and for the students** was unveiled before public.

[4] FOUNDING TEAM

(MIIC Team Pratistha: 2019-21)

Observing the criticality and sustainability, the building process for its founding team was crucial. Prof. GD Karhadkar and Dr. Akash Pandey played an important role in the same. These pillars not only formed a sustainable foundation but with their will and commitment, they took this idea to a next level and as a result, **the foundation year 2019-20** was a grand success. Heartily gratitude to all our visionary teachers who have supported this noble initiative.

The tagline "**Redefining Possibilities**" gives each and every individual the confidence to stand for a positive change. We wish and hope that its existence contributes and impacts lives in some small way for the better.

Samkit A. Kothari
(Founder)

Prathmesh Jadhav
(Co-Founder)

Aakash Kavaiya

Kishan Parmar

Bhavik Patel

Jay Panchal

Kausik Goshwami

Ranjana Shrivastava

Shrey Patel

Meet Patel

Juzar Vohra

ABOUT MIIC

Mechanical Industrial Interaction Cell is a non-profit student-run facilitation unit that is responsible for organizing various activities and training opportunities for enhancing soft skills and interacting with various Industrial, Technical and Educational organizations in Vadodara City and other cities of Gujarat with the aim of ensuring that the students of the Mechanical Department, Faculty of Technology and Engineering, The Maharaja Sayajirao University of Baroda are given adequate technical exposure.

VISION

To create industry leaders of tomorrow by empowering students through proper training and career opportunities.

MISSION

To groom students meticulously & empower their employability potential by bridging the gap between industrial and academic learnings through various training & growth opportunities.

[5] SECOND YEAR: AN ONLINE ITINERARY

The year 2020, as we all know was a tough year for everyone around the world. The Covid-19 pandemic in its full-fledged form had taken over entire India and the world and we were no different! MIIC was a new cell with just one year of experience.

September 2020 - The founding team had passed on the baton and all coordinators named Arjav Desai, Dhaval Vala, Hiren Mistry, Kartik Patel, Nimesh Makwana, Parshwa Kamdar, Rohit Kadachha, Sujith Nair and Zainul Bhaisaheb had just joined MIIC in its initiative to make the students of the Mechanical Department a better version of themselves. The concept of online education was already a confusing and difficult one for students and now engaging them in online activities and other events was a real challenge for us as the concept was foreign to us too. But that's the thing about challenges; you don't overcome them unless you face them!

"Challenges are what make life interesting; overcoming them is what makes life meaningful!" (Joshua J. Marine)

With the motivation and guidance of the advisory board and strong willpower to work for our students, we decided to make the best out of this online scenario. We did our first activity - Group Discussion in which at first the students were hesitant to participate but after a little motivation they decided to take up the challenge with us. From there after a little off-roading, the journey of MIIC went smooth like a glider in an open sky. The challenges kept coming and our team kept facing them head-on. From starting with small sessions to building our own **MIIC4U mobile application to connect the unconnected**, we never stopped. In the midst of the COVID-19 pandemic and after observing the situation, MIIC hasn't collected any contribution funds from student members.

MIIC has a vision to create the industry leaders of tomorrow and it will keep working on it. We were and will always be excited and motivated to work for the students. MIIC will strive and keep working harder than yesterday to make our students' lives better.

[6] THIRD YEAR : REROUTING TO NORMALCY

The second wave of COVID in 2021 shattered the dreams of all students to come back to college again and have a normal education. In the midst of this new-normal MIIC decided to proceed as usual and have a new team take over.

With the second-ever team of MIIC Coordinators passing the baton, a new team on-boarded MIIC. This team comprised of Bhavin Shiroya, Hiren Parmar, Manthan Patel, Nandish Thacker, Ridham Prajapati, Sharad Pandey, Shishant Asnani, Surendra Solanki, Vatsal Patel and Yash Rajgor. With a common aim to uplift the employability of Mechanical Department students and a mission to help these students to achieve new heights, the team started planning and mapping out their game plan. With colleges still under the spell of online education, we decided to not sit idle waiting for colleges to start. We started of our term with Technical Club wherein students presented topics from the Mechanical field that excite them. The students showed some signs of hesitation and nervousness but as the year went forward, they definitely improved a lot in such aspects after participating in the events organized by MIIC. We had numerous online Expert Sessions but still couldn't get any practical sessions due to the college being shut. As soon as college started shifting to normal times and opened the doors for students, we brought Industrial Visit opportunities for students to see how marvellous engineering can be with a hands-on experience.

With our term being half online - half offline, we made sure the students got the best of both mediums. We were the third team to bear the torch of MIIC but the fire of **vision and mission was as bright as when it was lit by the founding team**.

MIIC has and will always make sure that the students get a learning experience of foremost quality so that when they graduate, they become the industry leaders of the future.

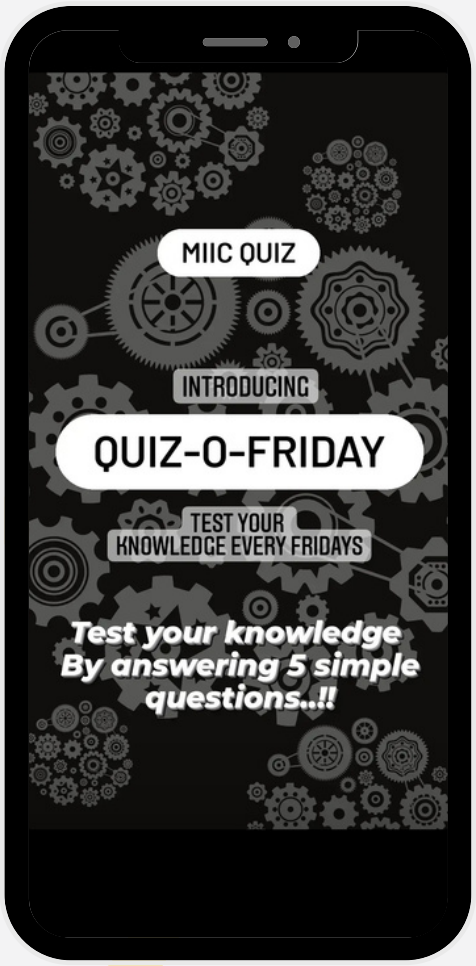
[7]
GLIMPSES OF ACTIVITIES (2021-22)

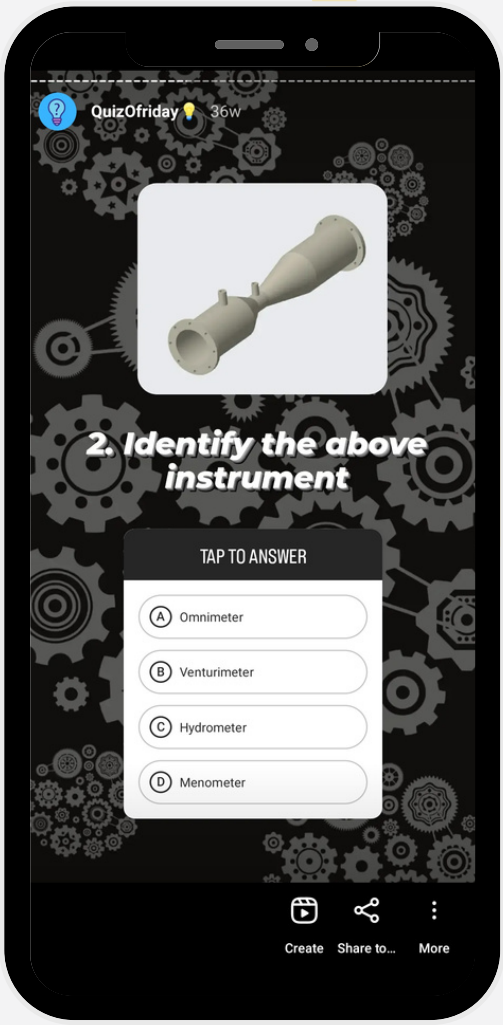
[8] QUIZ-O-FRIDAY

(A Weekly Quiz)

Taking a step forward from last year's Tech-O-Thursday, this year we initiated the all-rounder Quiz-O-Friday wherein every week quizzes were undertaken in the field of General Knowledge, Aptitude, Reasoning and of course – Technical !

Every Friday on social platform Instagram these quizzes were taken since November 2021.





It was still the phase of online studies and hence because of this activity students could benefit from utilizing their time productively when it would have gone in scrolling reels otherwise.

The topics covered in Technical segment were from all the core mechanical subjects like **DOM, SOM, Thermodynamics, Production Technology, Fluid Mechanics etc. while Aptitude, Reasoning and GK** also revolved around handpicked important topics providing students with the best preparation one can.

[9] APTITUDE MANIA

Similar to Quiz-O-Friday, our other initiative was Aptitude Mania. The aptitude section is like a starter served at the beginning of any examination served to us engineers. A workshop was conducted with Tridal Upadhyay Sir from IMS Vadodara on how tricky this section can get and how to still deal with it. Common aptitude topics were discussed in great depth and students were given tough questions to attempt and to understand the trick behind solving it.
Topics covered are like:

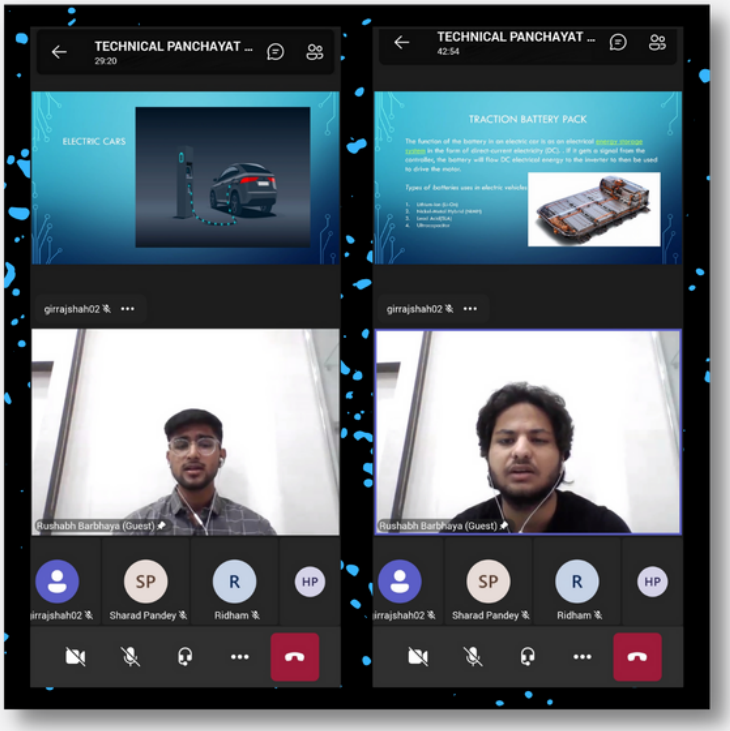
1) NUMERICAL REASONING
2) ENGLISH USAGE TEST
3) ANALYTICAL AND LOGICAL REASONING

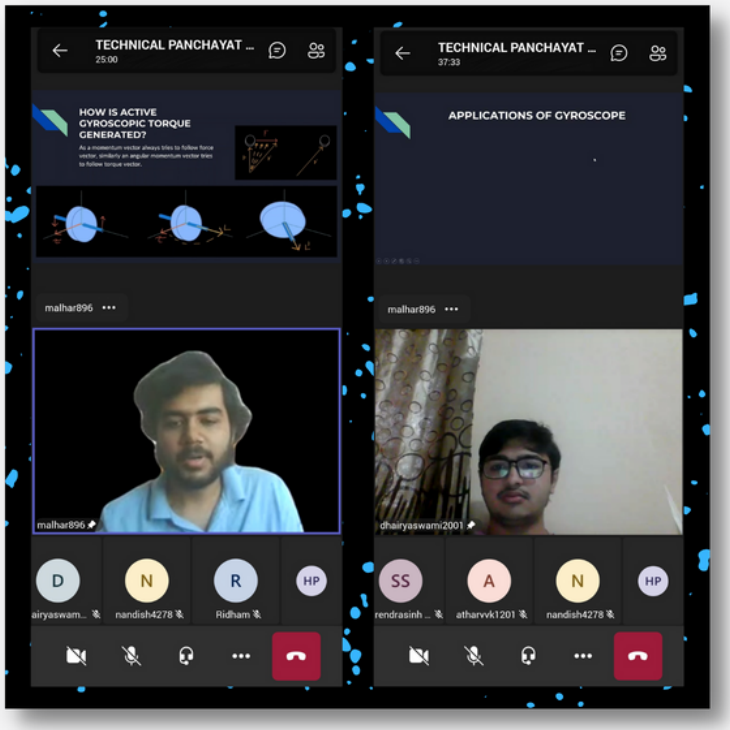
Following this, a very rigorous aptitude test was taken every week for students to brush up their brains and start preparing for aptitude. Each test covered a few topics and with weekly tests soon all the topics were covered making students ready to face the start, that is Aptitude.

[10] TECHNICAL पंचायत

What good is knowledge to one if he can not express it when needed? Almost everyone has anxiety when it comes to speaking in front of an audience even though they are confident of what they have to speak. Team MIIC identified this as a major problem among our students and decided it was about time to do something about it.

Hence, the Technical Club segment was born. The first activity under the banner name of the Technical Club was the Technical Panchayat. Under this activity students got a platform to present anything that interested them in the Mechanical Engineering field in front of an audience. Students were free to be in groups or to present solo. They were given time to research heavily in their chosen topics and to submit a PPT presentation before the activity was planned.





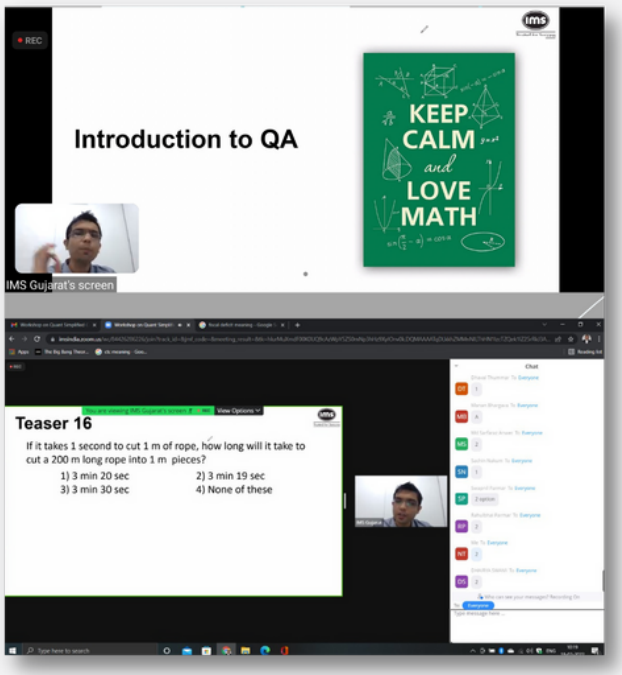
On 4th December, students presented their views and ideas on their favourite topics like **Electric Vehicles, Hybrid Vehicles, Carbon Capture Technology, Gyroscope, ERW Welding, Cryogenic Engines,** etc. in front of an audience. Healthy discussion and Q&A sessions also followed the presentation. Thus participants came over their fear of public speaking while the audience went home with a deeper knowledge of practical mechanical engineering.

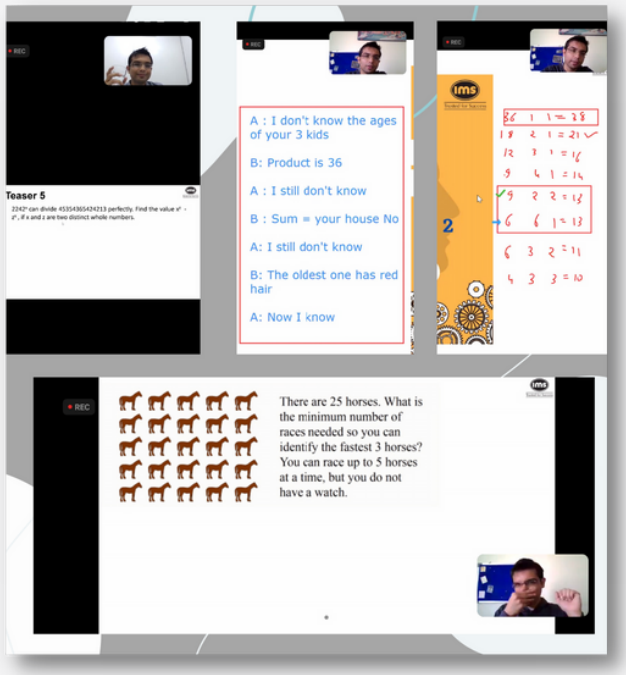
[11] APTITUDE AND REASONING WORKSHOP

"No tricks, no tools, but talent makes a task truly top class."

The above quote holds good but surely talents can be grown and adapted. The talent here refers to one's Aptitude and Logical Reasoning. Aptitude and logic questions always serve as an opener to any examinations as well as to recruitment processes. To enhance this skill Team MIIC along with the support of **Mr. Tridal Upadhyay**, an IMS Educator held a two-day workshop on the same.

We heartily thank IMS, Vadodara and Mr. Tridal Upadhyay Sir for his wonderful learning session. It was splendid and amazing learning about the basic Aptitude and logical questions.





[12] EXPERT TALK

(A) MS. SHIVANI MADAN BOSE

Being anxious about **HR Interviews** is now hardcoded in the genes of engineering students now. Identifying this as a problem we at MIIC invited Ms Shivani Madan Bose, an HR Subject Matter Expert to interact with students and give them insights on how to tackle the HR round of an interview.

Further being a Soft Skill Trainer she covered a good part of her session teaching students how to uplift their soft skills and become unique among the mass competition happening in recruiting. She covered the interview process by explaining to students what is happening on the opposite side of the table, the reasons why they are conducting interviews and what they might be expecting in their ideal candidate.

The dark side of an interview process is rejection. Sometimes students get lost in that darkness if they aren't taught how to deal with them. Shivani Ma'am also covered the tips and tricks of handling rejections and how rejection in one interview can fuel a student for the next one.

A long discussion was also done on how to keep a positive attitude towards an interview and how one should prepare for it. Very intricate details were shared to students on all such topics.

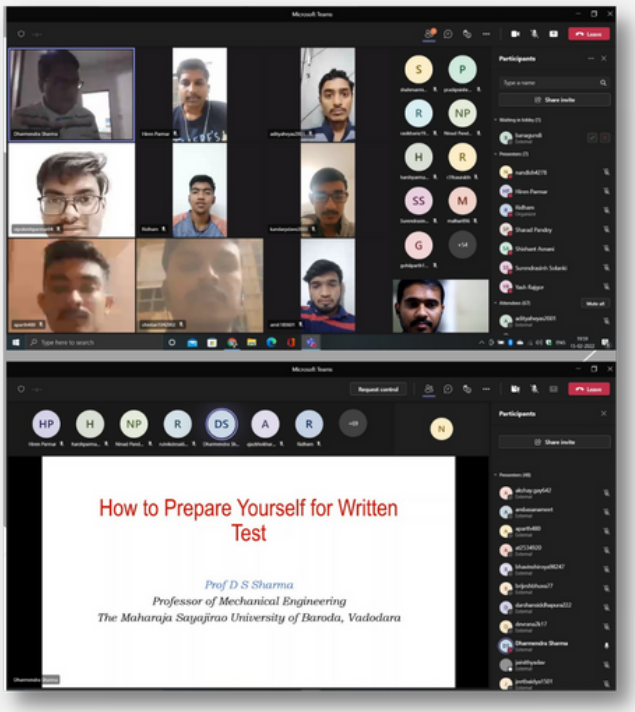
Lastly, everyone's favorite segment – Frequently Asked Questions and how to tackle them. Students got a lot of confidence as they understood what an interviewer wants to listen while asking such common questions and how one can set themselves apart by the right usage of words and meaning. Also Ma'am enlightened us with minute details of hand and body gestures and body posture while being interviewed.

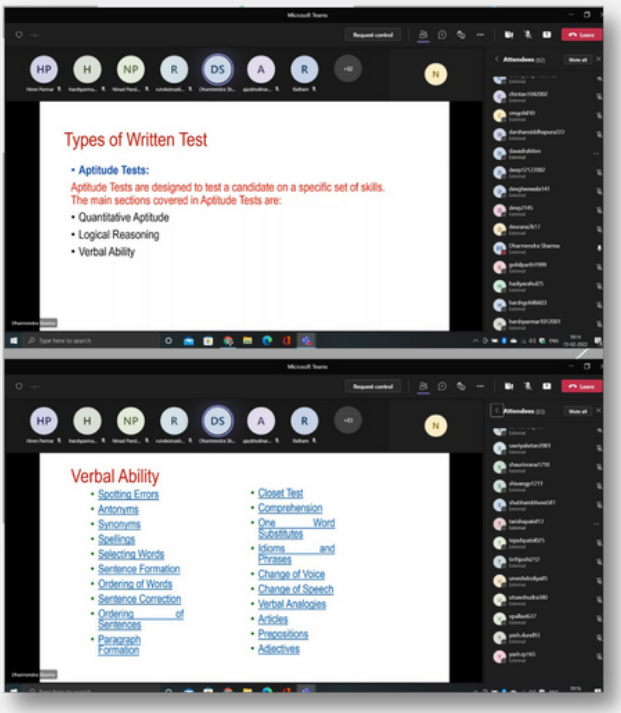
At the end of session Ma'am opened the floor to answer any questions students had. A healthy interactive session ending with Q&A gave students a great amount of clarity in a very tricky matter.

[12] EXPERT TALK

(B) DR. DHARMENDRA SHARMA

Its always better to have a known guide while travelling the unknown lands. For our session on the subject of **How To Prepare Yourself For Written Test**, we invited Dr. Dharmendra Sharma Sir, who were previously Head of Mechanical Engineering Department, Faculty of Technology and Engineering, The Maharaja Sayajirao University of Baroda.





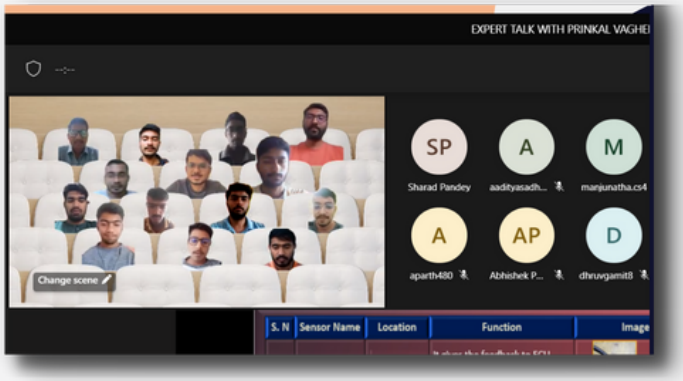
For almost all placement drives the very first filtration of students is done on the basis of a written test. This test can comprise of anything and everything of the four years of B.E. syllabus along with aptitude, logical reasoning, etc. Hence students get very confused while preparing for such tests as to how to prepare from such a vast syllabus in such a small time. To help students understand how to tackle such a difficult obstacle, Dr. D.S. Sharma Sir conducted this insightful session explaining methodically how one can easily prepare for such written tests. He even gave reference book names which can serve as an aid while preparing.

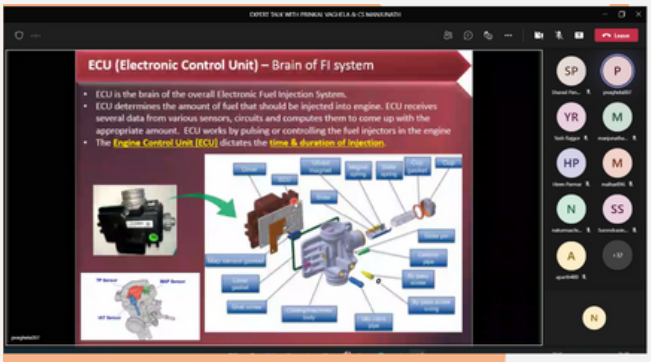
The session was an interactive one wherein students asked their individual queries which were cleared by Sir. Everyone were highly motivated to start preparing for written tests by the end of session.

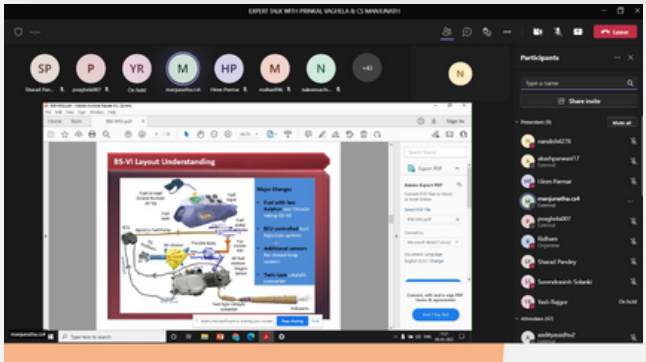
[12] EXPERT TALK

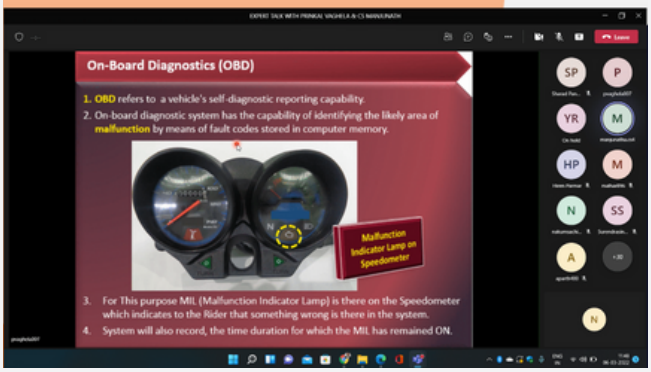
(C) PRINKALSINH BAGELA & CS MANJUNATH

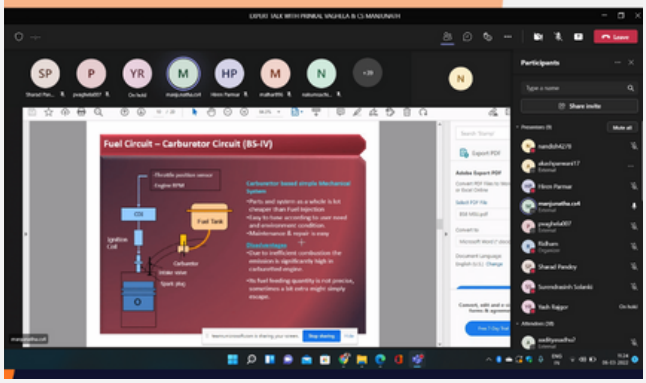
The third Expert Talk was about **Engines and BS-VI engines** for which we invited experts from **Hero MotoCorp.** Discussion in this expert talk started with engines leading upto the latest engine norms – BS6 Engine.











All the fundamental differences between BS4, the predecessor of BS6, and BS6 Engine were laid out. Coming towards BS6 engine its major and minor components were explained with their location in the engine and their function. Even the layout of BS6 engine was discussed along with the reasons and environmental impact of the new engine norm.

This discussion was then taken towards fuel system of automobiles and how rapidly it is changing.

Fuel circuit of a vehicle was explained in depth by the expert and they even talked about the massive changes that were happening in vehicle regarding the fuel-air mixing components. Fuel injectors and its pros cons were talked about by the end of the session.

This session was entirely on the subject matters of practical engineering and gave students immense ideas on what exactly goes on in an industry when it comes to development.

[12] EXPERT TALK

(D) CHINTAN MEHTA

"Listening is an art if mastered, works wonders."

Continuing our conversation with experts in their respective domains we were obliged to have Mr. Chintan Mehta the founder of AutoZiast a leading motorsport and automotive organization.

(first offline session of 2022)

This was the first offline activity after the pandemic session and the students of Mechanical family actively and enthusiastically joined the session. The topics involved the curious automobile sector, which has been in the minds and hearts of any mechanical engineer.

It was really an insightful session with respect to the topics as well as the content our guest speaker presented for our students.

We, engineers, are always keen on knowing the mechanism as well the true methodology behind the racing cars and the technologies. Keeping this in mind the topic for his talk was Tyre technology, Fuels, Alternate Energy, Motorsports and its scenario in India. It was a wonderful learning session where we came across all the above topics in a dynamic and exciting way.

The talk was graced with the esteemed presence of HOD our very own Dr. Lt. Piyush Gohil Sir as well as our Faculty Professor Sanjay Patel Sir. Their presence surely boosted each and everyone's moral a lot.

[13] DEPARTMENTAL INTRODUCTION

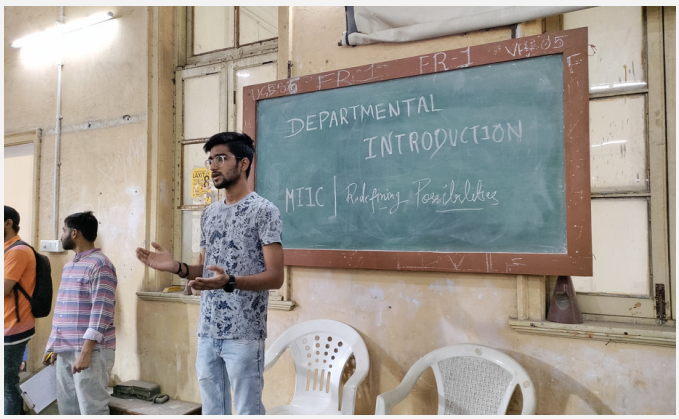
(for Mechanical Department Junior Students)

"Knowing once possession is always better than others belongings."

With this affirming note when backing normally to college after the pandemic, on 9th March 2022 the new Mechanical Engineering members that is the 1st Year as well as 2nd Year students were briefed about our rich and prosperous Mechanical Engineering Department at Faculty of Technology and Engineering.

They were informed about the facilities across the Faculty as well as the Department. The advanced and prestigious laboratory setups were also discussed with them.

We express our deepest gratitude to Prof Akash Pandey Sir whose presence and guidance motivated and inspired all the students. His words supercharged the students.



Departmental Introduction was revolved around these topics :

- History of Faculty.
- History of Enriched Mechanical Department.
- Advanced Laboratory setups at Mechanical Department.
- Soft skills to be developed during these years.
- Information about the administrative procedures.

[14] INDUSTRIAL VISITS

(A) SEE LINKAGES PVT. LTD.

"**An engineer is more of a learner on the practical ground than in virtual theories**."

Following the above quote and the legacy of MIIC this time too Industrial Visits were organized in areas near Vadodara. The visits are important in getting an overview about the future role as an engineer as well as making us aware about the corporate journey coming ahead.

On April 8, 2022, MIIC conducted its first industrial visit on grounds after the pandemic at SEE LINKAGES PVT. LTD. at GIDC Makarpura, Vadodara.

Around 30 students participated and grew their vision of the **Machining Processes.** This was possible with the great support of **Mr. Bhavik Khere, MD of SEE and Ms. Riddhi Shah, HE at SEE.** Our heartiest thanks to all the members who lend their support in making this even possible. It was a great opportunity of learning for all of us.

[14] INDUSTRIAL VISITS

(B) INOX CVA PVT. LTD.

INOX CVA has stamped its authority as a global market leader in the highly challenging field of **vacuum-insulated cryogenic equipment** across the world, from India. At first, we were introduced to the whole plant process from start to the end, and then in detail about what is cryogenic temperature and various welding processes depending on the size of the cryogenic tank and its application were shown to us. One of the most dangerous gas to handle, which might be the future automobile fuel that is hydrogen gas, whose storage tanks were being manufactured in the industry. Several inspection methods like **radiography/X-ray test, leakage test, and Liquid penetrant test** were also part of this 3 Hour visit. In total 40 students gained practical knowledge or have seen the manufacturing which they might have learnt in class or in books.

[15] INTERNSHIP PROGRAM

Internships are a salient opportunity to put to test one's academic learnings. It gives a competitive edge and happens to be a good time for testing one's skills. internships serve as a preparatory stage for professional life and preclude the candidates from the challenges.

MIIC with a vision to bridge the gap between the academic and professional careers of students. This year we endeavoured to provide fellow students with hands-on experience of industrial exposure via internships. With the sole **purpose of giving candidates job experience, mentorship and a Professional Network so that they can build upon their resumes. We were able to provide 100% internship** to the students of Mechanical Engg. Dept., Faculty of Technology & Engineering, The M.S. University of Baroda who applied for the opportunity.

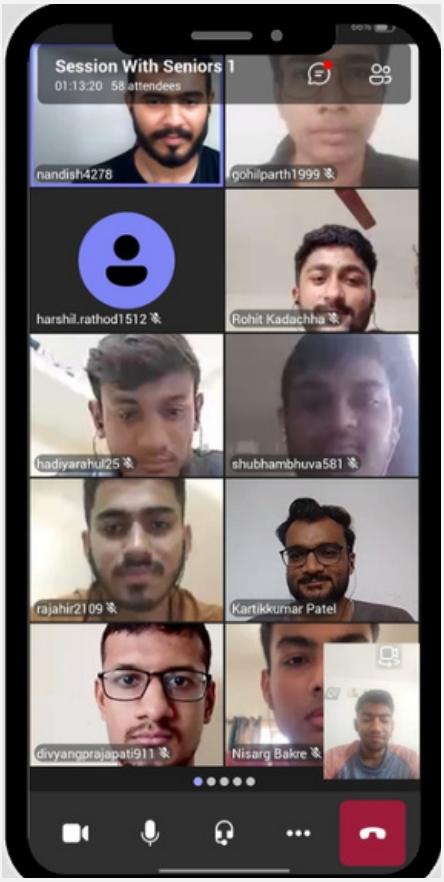
Following were the organisations which played a significant role in achieving this goal of ours. MIIC is extremely grateful to the following organisations for being our companion in helping the students in their learning process and contributing to building a bright future.

- **Cosmos Impex Pvt. Ltd.**
- **Elecon Engineers Co. Ltd.**
- **Gromax Agri Equipment Pvt. Ltd.**
- **Rhino Machines Pvt. Ltd.**
- **SEE Linkages Pvt. Ltd.**

We as a team believe that MIIC was successful in providing a platform for students to excel in their professional careers and have an enriching experience they can cherish.

[16]
SESSION WITH SENIORS

One of the Highly sounding sessions was "Session with Seniors". Every doubting mind of junior was present here and every senior with his/her experience in pursuing a career was the speaker.



It was a 2-day session divided into parts, the first day was based on the topic of competitive exams for eg. GATE, CAT IELTS, GRE. Seniors preparing for respective competitive exams have guided their juniors with the problem and solutions which they might have faced during the preparation.

MIIC is thanking Zainul Bhaishab, Rohit Kadacha, Kartik Patel, Diyang Prajapati & Nisarg Barke for making the placement session fruitful Preet Vala, Nisarg Barke Rinku Prajapati and Hirent Misty also gave input to the second session of Competitive Exams.

The session found insightful for the juniors who will be either entering the industrial and corporate world or moving with the pursuit of their masters.

MIIC will continue with the efforts not only to uplift but also to mentor and guide moving forward.

[17]
GLORIOUS 3 YEARS

जीत की खातिर बस जुनून चाहिए, जिसमें उबाल हो एसा खून चाहिए।
यह आसमां भी आएगा ज़मी पर, बस इरादों में जीत कि गुंज चाहिए।

On 27th June 2022, we at MIIC marked the 3rd Anniversary of this glorious team. The main celebration was backing normal days after the tough pandemic. We initially begin the offline activities with a departmental introduction to all our new family members (1st and 2nd-year mechanical engineering students). Afterwhich various expert talks, workshops, Industrial Visits Internship tests, etc. were conducted.

A new segment Technical Panchayat was introduced this year to increase the technical depth and various preventative skills in an individual.

Later the day was made memorable by doing Ganesh Pujan along with the sapling plantation program.

This year we embraced the new normal by gradually bringing the offline days back, after a horrifying pandemic. We extend our heartfelt gratitude to over 450 students, all faculty and staff members of the dept. who have contributed a part to MIIC over the years.

We are blessed to be at the centre stage, leading this small positive change in the faculty for 3 years now and hopefully more, with **the responsibility to innovate and take this initiative to new heights with a promise of growth, keeping our mission and people at the core always!** It was a memorable 3rd anniversary for the whole MIIC Family. We were joined by Our Head Dr. Lt. Piyush Gohil Sir. We thank him as well as Sanjay Patel Sir for guiding us on this day.

[18]
MIND: MENTORSHIP IN NEW DIRECTION

Another brand new initiative this year by Team MIIC was **the MIND program** which stands for Mentorship In New Direction.

Whatever a student is feeling or experiencing, chances are someone else also felt that way a year ago. Our seniors are the closest people who can understand things we aren't sure about and how to get clarity on such things. Under our initiative, it was possible for students to seek guidance from helpful seniors who were willing to throw light on matters of their expertise.

Seniors informed students about their expertise fields from Production, Manufacturing Design, IT, Civil Services, etc. so that students knew whom to approach for their confusion. Weekly meetings were scheduled at a time and medium of mentor and mentee's convenience.

If mentees felt that they wish to seek expertise in different fields they were allowed to change mentors so that everyone gets the maximum guidance and hence clarity.

MIIC is grateful to the senior batch who were enthusiastic about helping out and becoming mentors.

[19]
CAMPUS-TO-CORPORATE WORKSHOP 3.0

"Engineering is not just about preparing for technical knowledge and technical problems rather it is a preparation for the corporate society and real-life problems."

With an aim to inculcate the initial corporate skillset and the actual preparation for corporate, our Team MIIC with the help and generous support of the **Faculty Of Psychology Department** organized a 5-day workshop termed "Campus to Corporate 3.0"

Ms. Poornima Karvat Ma'am, Mr. Kashyap Rajput Sir and the whole team of MSU Psychology Faculty took the initiative to make this event possible. In this workshop, the final year students of Mechanical family were taught from the very basics of campus to becoming masters in corporate skills.

Ms. POORNIMA KARVAT
President at Management AIDS

Dr. SHRADDHA MATHUR
Assistant Professor CES

Mr. KASHYAP RAJPUT
Assistant Professor

Dr. AKASH PANDEY
Assistant Professor

Dr. GIRISH KARHADKAR
Associate Professor

Dr. I. I. PANDYA
Former head & Professor

The week-long workshop was graced by the presence of **Dr. Girish Karhadkar,** Associate Professor at our very own department during the inaugural session.

Special thanks to **Dr. Leena Mehta Madam, Sagar Rajput Ma'am, Heli Ma'am, Adnan Turak Sir and Psychology Department students** for making this workshop possible and smooth.

The 5-days long workshop was designed in a manner which holistically covers various aspects that needed to be inculcated. The brief of the days is covered in the following pages of the report.

[DAY 1]
RESUME BUILDING

"Not each detail of one's own is given verbally".

A resume holds one's whole identity on a written basis. The session by the Faculty of Psychology Department briefed us about the difference between C.V. and Resume, the Do's and Don't of a Resume, the points that make your Resume a master shot as well the layout and design a resume should be designed. Each point was very well explained with exciting activities and presentations. We thank the whole team for their efforts behind this Day 1.

[DAY 2]
COMMUNICATION SKILLS & EMAIL ETIQUETTES

"A specific knowledge in one domain leads to no progress unless presented properly."

Communication skill is a basic and fundamental to any process. A proper formal approach to communicating at corporate was wonderfully explained and taught on this 2nd day of the Campus to Corporate 3.0.

The basic medium of communication, " Email" too was explained and its basic etiquette was discussed during the session. It was a very fruitful and amazing session with all the fun activities carried during the session.

[DAY 3]
GROUP DISCUSSION

The third day of Campus-to-Corporate 3.0 was all about Group Discussion which is a very essential part of any recruitment/further studies process. A deep understanding of the **Art of Group Discussion** was taught to the students by the experts from the Faculty of Education and Psychology and then were told to put their knowledge to use by participating in Mock Group Discussion.

Each student was given personalized feedback with the intent of their individual growth. Students until now had always feared the activity Group Discussion but based on the feedback we received after the session, students grew quite some confidence and some even admitted to saying that Group Discussion excites them and is no longer a thing they have to be nervous about, which was exactly the aim of MIIC for hosting this session.

[DAY 4]
PERSONALITY DEVELOPMENT

Once knowledge, attitude and the capability to learn and grow are reflected in his/her personality. In this era of competition, we are more into academics and books. Rather what counts more is one's character, one's personality and one's ability to express his/her learnings to the world in a proper manner.

To inculcate such values and to groom the best in this Professional World, Day 4 of "Campus to Corporate 3.0" was dedicated to understanding and learning the importance of Personality Development. Our mentors i.e. Faculty of Psychology Members worked brilliantly and made us realize this topic in the best way. Topics like Self confidence, Intelligence quotient, and Emotional Quotient were very well explained and briefed.

[DAY 5]
PERSONAL INTERVIEW

The last day of our Campus to Corporate 3.0 marked the learning of the most difficult process of stepping into Corporates. It is a Personal interview. We were firstly explained by the mentors the Do's and Dont's in the Interviews along with some basic tips to ace the Interviews.

Mock Interview was demonstrated too by the mentors as well as by our students. Afterwhich there were 6 panels each at a time taking Interviews of our students and giving their valuable feedback and rectifying the students. It was a great learning experience for all the participants.

C2C: ENDING CEREMONY

Marking the end of this wonderful and great learning, 5 day-long workshops "Campus to Corporate 3.0" a valedictory ceremony was held which was graced by the presence of **Dr. I.I. Pandya Sir** (ex HOD Civil Dept and a great asset to the MS University), **Dr. Shraddha Mathur Ma'am** (mentor for C2C and Faculty at Psychology Dept), **Dr. Kashyap Rajput Sir** mentor for C2C and Faculty at Psychology Dept) and **Dr. Akash Pandey Sir** (Assistant Professor at Faculty of Technology). We would like to thank each and every one whose support and guidance helped us for making this workshop possible.

Image Courtesy: PixaBay

[20] KALACORNER

Unleashing the creative artist in you!

REDEFINING POSSIBILITIES

MIIC

MECHANICAL INDUSTRIAL INTERACTION CELL

ઇરવર્સીબલ એન્જિનિયરિંગ

Writtten By: **Nimesh Makwana,** Batch 2018-22, Mechanical, FTE MSUB

ઇરવર્સીબલ છે આ એન્જિનિયરિંગ હવે પાછી નહિ આવે ભેરુ,
જોજે અડગ રહે આપણી આ યારી ભલે ડગી જાય અડગ મેરુ,

વાતોના પણ જે ભર્યા છે થેલાં એને ખોલવાના તું ભૂલતો નહિ,
પાછા મળીએ કે ના મળીએ આપણી ભાઈબંધી ને તું મુકતો નહિ.

તું પોઝિટિવ હીટ ટ્રાન્સફર તો હું પોઝિટિવ વર્કડન છું,
તું ઝીરો વોલ્ટેજ ડ્રોપ તો હું પણ શોર્ટ સર્કિટ કરન્ટ છું,

તું સ્ટ્રેન તો હું ડાઈરેકેટલી પ્રપોર્સનલ સ્ટ્રેસ છું,
તું અનનોન એક્સ તો હું એફ ઓફ એક્સ છું,

તું કનેકટિંગ રોડ ને તો હું સ્લાઈડિંગ પીસ્ટન છું,
તું ફ્લોઇંગ ફ્લુઇડ તો હું પાઇપ એન્ડ સિસ્ટર્ન છું,

તું શિયર ફોર્સ તો હું બેન્ડિંગ મોમેન્ટ છું,
તું કેવીટેશન તો હું પણ એડવર્સ ઇફેક્ટ છું,

તું અનઇવન શેપ તો હું ફોર જો ચક છું,
તું બ્રેકીંગ લાઈનર તો હું પણ બ્રેકડ્રમ છું,

તું સ્ટેટિક કમ્પોનેન્ટ તો હું ડીગ્રી ઓફ રીએકશન છું,
તું સ્ટ્રેસ કોન્સન્ટ્રેશન તો હું પણ ફટીગ ફ્રેક્ચર છું,

તું અસાઈનમેન્ટની સ્પલાય તો હું એની ડિમાન્ડ છું,
તું સી પ્લસ પ્લસ લેંગ્વેજ તો હું એની કમાન્ડ છું,

તું કલાભવન તો હું મિકેનિકલ ડિપાર્ટમેન્ટ છું.
તું છે મારો ભેરુ તો હું પણ બહુ ફોર્ચ્યુનેટ છું,

ઇરવર્સીબલ છે આ એન્જિનિયરિંગ હવે પાછી નહિ આવે ભેરુ,
જોજે અડગ રહે આપણી આ યારી ભલે ડગી જાય અડગ મેરુ.

Image Courtesy: PixaBay

HYDROGEN AS A FUTURE FUEL: ATTRACTION & REALITY

Writtten By: **Nandish Thacker,** BE 4 Mechanical, FTE MSUB

Why is the need for blue hydrogen & green hydrogen?

Hydrogen is lighter and less dense on a volume basis but highly dense on the basis of mass. Hydrogen was used as fuel in industries, automobiles, etc but the origin of production was harmful to the environment as the process releases harmful CO2 gas this produced hydrogen is called Grey hydrogen. So, there was a need of getting a way out of this harmful gas.

What is blue hydrogen?

You might be thinking what are these colours associated with the hydrogen? There are mainly three types:

1) Grey hydrogen 2) Blue hydrogen 3) Green hydrogen

Image Courtesy: iStock, Getty Images

Writtten By: **Nandish Thacker,** BE 4 Mechanical, FTE MSUB

Since the 1800s Hydrogen is used as fuel from methane and natural gas reformation with steam. But as harmful as the by-product was CO2. So, to get a way out CCUS (Carbon Capture Units & System) are established and in this way, hydrogen produced is called Blue Hydrogen. The basic difference between Grey Hydrogen and Blue Hydrogen is that in the production of Grey hydrogen carbon was released into the environment. but in blue hydrogen, the carbon released is captured in the solid or liquid form and can be applied to the cement and steel industries.

What is the word Green Hydrogen?

In Blue hydrogen and grey hydrogen, the method of production of hydrogen is by steam reforming from methane or natural gas. Hydrogen is produced by the electrolysis of water and the required electric power is supplied from renewables then it's called Green Hydrogen. Earlier the method of electrolysis was used for laboratory application but after 2012 the large-scale production of green hydrogen came into sight.

Is it so easy to produce and store Green Hydrogen? There are some consequences in the upcoming fuel we say "Hydrogen". The first one is the renewables specifically we say Availability of Renewables, in European countries the availability of Solar and many more is not so sufficient due to geographical reasons. But the availability is very much sufficient for African and Asian countries. The second consequence is the Storage in this we have to learn the word Hydrogen Embrittlement it is the loss of ductility and reduction of load carrying capacity of the metal in which hydrogen is stored. In the polymer, there is leakage of hydrogen and too risky.

LIFE: A JOURNEY

Writtten By: **Vatsal Patel,** BE 4 Mechanical, FTE MSUB

It starts with tears of ours
But ends with tears of others,
Its a gift given by the mighty power
Who are the director and we the actors
It is like a wave going up and down
Or like a spinner, spinning round and round,
But it is once for a while to live a life,
To live it to the best, leaving the rest,
To cherish every minute with near and dear ones,
With love, kindness, empathy and brotherhood,
Which makes u enjoy But don't let ego,
Prejudice enter my times
Or I'll be the worst to u and ur ones
So keep me going till the sky
Let me be free like a bird,
But have my value like your nerve,
Cos I'll come just once n all.

Image Courtesy: iStock, Getty Images

OUR EARTH TO WONDERFUL UNKNOWN WORLD

Writtten By: **Chandan Shah,** BE 4 Mechanical, FTE MSUB

Part A: Path of a Wonderful Journey:

We are living on this beautiful earth where we got everything because of which we are alive. The journey begins from this. Nature didn't make discrimination between us and other species but it is true that they use to obey the laws made by nature far better than us. We have made our own laws neglecting so many of nature's laws by developing our own Governing laws. This has made humans grow more effectively but snatched many things from nature and from the other creature living on this earth only (can one think?).

But yes, we have made so many revolutionary skills in every discipline of learning and thereby applying the same in practical learning mistakes and developing reforms again in every discipline that what humans made extra-ordinary among the rest of creatures and now have become extraordinary than others.

But when thinking about all these, one question arose. This human activity towards human development, the human life cycle, do all these will always exist? Will, we also do the same kind of work which are being done in the various work disciplines made by humans?

Image Courtesy: iStock, Getty Images

Writtten By: **Chandan Shah,** BE 4 Mechanical, FTE MSUB

We always use to develop ourselves, looking to succeed and we take the one's work position to continue the human progress and use to build ourselves confined to this artificially made/developed/formed world and again the same scenario goes on.

Here, one can believe that money plays an important role in the human lifestyle and behaviour which they develop while working in their work division. They (most of them) wish to change themselves and want to be. embedded for it just to satisfy the motive of good money. However, they actually did not want to have that.

Part B: Feeling of Happiness by Eliminating the motive of Good Money: Just to make yourself happy by distinguishing yourself from this already developed world.

Space Exploration (the world beyond you!): What if we want to know the things which are unknown? The world is not created like us where the laws are governed just only by nature. The vanishing soul can reach its destination. The root of the balancing factor has made everything balanced.

The nature where the unknown laws can be seen from its origin. The land demands only a fruitful world consisting of real truth and many more. (every point has its own importance and requires deep thinking). If you will reach anyone above these points then the motive of exploration is achieved against the motive of money. Try to develop yourself with the root of your own point of interest rather than developing just for satisfying greediness. The motive is to "Explore Your Work".

EMAIL: PARMATMA TO HUMANS

Writtten By: **Nimesh Makwana,** Batch 2018-22, Mechanical, FTE MSUB

પ્રોગ્રેસ રિપોર્ટ

From: parmatma@vaikunth.ac.in

To: admin@pruthvi.ac.in

Sub: પ્રોગ્રેસ રિપોર્ટ

પ્રિય પૃથ્વી વાસીઓ,

શુભેચ્છાઓ !

ગઈકાલે બ્રહ્માંડ લોકો ની લાસ્ટ યીઅર ની પરફોર્મન્સ મિટિંગ થયેલી. એમા બધાં ગ્રહોમાંથી પૃથ્વીનું પરફોમન્સ સૌથી ખરાબ છે. એકપણ એરિયામાં તમારો કોઈ પ્રોગ્રેસ થયો નથી. બધા ડિપાર્ટમેન્ટ તરફથી ફરિયાદોનો ઢગલો કરવામાં આવ્યો છે. વેધર ડિપાર્ટમેન્ટના કહ્યા મુજબ ત્યાં કામ કરતો લાલિયો હમેંશા ટાઈમસર જ વરસાદના પાણીની મોટર ચાલુ કરે છે પણ તમે જે ઓઝોનમાં ગાબડાં પાડી નાખ્યા છે એને લીધે જ્યારે પાણી ન જોતું હોય ત્યારે લિક થઈ જાય છે એટલે પછી જોતું હોઈ ત્યારે હોતું નથી. એ ગાબડાં ભરવા હોય તો ભરાય પણ, તોય તમારે તો જંગલ કાઢીને મોટાં શહેરો જ બનાવવા છે. એ નેચરલ કન્ઝર્વેશન ડિપાર્ટમેન્ટની ફરિયાદ છે. સફાઈ વિભાગની રજુઆત છે કે હજી સુધી આ સ્પેસમાં ફરતા તમારા તુટી ગયેલારમકડા જેવા સેટેલાઈટના નિકાલનો તમે ઉકેલ નથી આપી શક્યા, એટલે એની પણ ઉતાવળ રાખજો.
વોટર મેઈનટેનન્સ વિભાગની ફરિયાદ છે કે તમે આર. સી. સી. રોડ તો વધારતા જાઓ છો ને પાછા બોરવેલ પણ ખોદતા જાઓ છો, તો એમાં પાણી આવે ક્યાથીં ! હેલ્થ ડિપાર્ટમેન્ટે રજૂ કરેલા એક રિપોર્ટ મુજબ સ્માર્ટફોનની ટચ સ્ક્રીન પર આંગળીઓનું કેન્સર નજીકના સમયમાં આવી શકે છે. તો આને ધ્યાનમાં રાખીને તો મોબાઈલ ઓછો વાપરજો. ને છેલ્લે પણ મહત્વનો કલ્ચરલ વિભાગની એ ફરિયાદ છે કે પૃથ્વી પર હવે બહુ થોડા જ મનુષ્ય બાકી રહ્યા છે, તો માણસ જેવા થાજો હો.

સાથે બીજી ફરિયાદો ની પીડીએફ પણ આ મેઈલ સાથે એટેચ કરી દીધી છે.
બાકી તો કંઈ કામ પડે એટલે તમે યાદ કરવાના જ છો.

તમારો મિત્ર,
પરમાત્મા.

ફરિયાદો.pdf (1000K)

Sans Serif

Send

EK AUR RAPE!

Writtten By: **MD Sarfaraz Anwer,** BE 4 Mechanical, FTE MSUB

This is a true incident happened in a small village named
Erki, Jehanabad of Bihar, India.

Himmat nahi hai mujhme
Ye baatein likh ke kehne ki
Us akeli ladki me bhi
Kahan thi himmat sehne ki
Ghar me ghus ke izzat looti
Loote uske gehne bhi
Kya itni badi thi uski galti
Ghar me akele rehne ki?

Maar diya use tum logo ne
Kar diya hum sabse durr
Sabki shikayat karegi Khuda se
Jinki vajah se wo bani majbur
Thoda sarkar ka, thoda samaaj ka
Thoda humara bhi hai kasoor
Jo rapist ghum rahe sareaam
Mita ke masoomo ka vadooj

Rape kiya masoom ladki ka
Jism pe chode gehre nishaan
Sisakti roti kehti bhi kisse
Apne bhi lagne lage the anjaan

Naye shehr-me-nayi zindagi jeene ka
Itna bura use mila anjaam
Khatm hui yaha insaniyat
Haivaan ban chuke h insaan

Rape kiya fir use maar diya
Taa ki chhut na paye koi gavaah
Maze me jee raha gunahgaar
Kyu mari padi hai begunaah
Kaise maanu tujhko khuda
Sab jaan ke-bhi tune kuch na kiya
Hasta khelta uska ghar parivar
Kaisa lag raha ab suna sunaaah

Sakht kanoon nai rapist ke khilaf
Tabhi rape case nahi thamti hai
Akeli ladki jo dikhe sadak pe to
Izzat lootne ki use dhamki de
Marne ke baad sabne pucha sawal
Aakhir Ladki kis dharam ki hai
Aise samaaj me rehne me
Aati mujhko sharam-si hai

Image Courtesy: iStock, Getty Images

"THE GREATER OUR KNOWLEDGE INCREASES THE MORE OUR IGNORANCE UNFOLDS": EVOLUTIONARY PHILOSOPHY OF PHYSICS

Writtten By: **Nirmalsinh Abada,** Batch 2018-22, Mechanical, FTE MSUB

We presently view the nature of the universe vary otherwise than did our ancestors through most of the human past it was supposed that there was one set of doctrines which applied to the procedures that happened on earth and a very dissimilar set of principles which governed the behaviour of the stars and planets which were thought of as the “heavens” were seen to be vitally different from the behaviour of objects in our everyday subsists here on earth this view of the universe changed forever with the theories of Issac Newton.

Newton believed that there were three laws of motion that applied to all objects here on earth, and that also equally applied to all objects everywhere in the universe. In Newton’s view, there were no longer two different collections of rules that applied to all objects universally. There is another story very similar to this. We once had a set of laws for magnetism and electricity which governed the actions of magnets and the flow of current through a wire and we had another very different set of laws for optics, which governed how light passes over lenses and bounces off mirrors. Then James Clerk Maxwell came up with the theory that light actually just a wave of electric and magnetic fields. Maxwell’s laws consisted of just one set of rules that not only illuminated all electricity and magnetism but also explained all the optics and behaviour of light.

Image Courtesy: iStock, Getty Images

Throughout history, regardless of subjects of subject matter, this rhythm has been repeated time and again. The more our knowledge advances the greater the no. of superficially distinct phenomena we are able to explain using fewer and fewer laws. This has led some people to speculate that perhaps one day, we will discover just one set of laws that are able to explain our phenomena everywhere in the universe. We now know that Newton's theory of gravity and Maxwell's laws of Electromagnetism are actually incorrect!

According to "General Relativity" gravity is not a force but due to the fact that objects with mass cause a curvature in Space-Time and according to "Quantum Mechanics" Electric & Magnetic fields do not actually exist and light is composed of a particle which we call photons. According to General Relativity, Objects moving in Straight lines through curved Space-Time seem curved to us, creating to the illusion of gravitational force. Conferring Quantum mechanics photons exchange b/w charged particle creates force, thereby creating the illusion of Magnetic & Electric Fields. The prediction of Newton's law of Gravity is now explained by Einstein's General Theory of Relativity, which also explains many supplementary new-fangled phenomena, such as how gravity affects the flow of time and the existence of black-hole, where time seems to stop completely. Similarly, Quantum Mechanics, also explains many additional Quantum Tunneling & the behaviour of atoms & amp; molecules. Newton's law of gravity and Maxwell's laws of electromagnetism appear to be correct to us only because their prediction gave great estimates beneath most of the conditions that we were classically able to observe. In exactly the same way, it is possible that GR and QM are likewise also only approximations of the real fundamental laws of Nature providing us with a sole unified explanation for everything in the universe.

We presently already know how to explain many biological processes entirely in terms of the underlying chemical reactions inside the cells. And how to explain many chemical reactions in terms of laws of physics therefore when we study physics, we are studying the foundation of chemistry, biology and everything that exists and that will exist and that will exist in future or at the very least, almost everything. It is imaginable to get through life without ever studying physics as human beings create magnificent works of architecture & engineering for thousands of years before anyone ever heard of Newton, Maxwell or Einstein. And there are many cases where viewing phenomena in terms of the laws of physics can actually take us further away from understanding them. As one example, a computer is based on the operation of Logic gates, which can either be "logic high" or "logic low".

These logic gates are based on the operation of transistors, and the operation of these transistors is based on the laws of quantum mechanics. The problem, though, is that even if we are fully aware of everything we can know about the position & momentum of all particles inside the transistors through the laws of quantum mechanics, we may still completely miss the logical meaning that the circuit signifies. This is the same way in which a detailed analysis of the atoms and molecules inside a neon sign will never tell us to sign spells “Joe’s dinner” Nevertheless, if we never study physics, then we are at a significant disadvantage, as an analogy suppose we need to be able to add two numbers together. One approach is to try to memorize the sum of every possible combination of numbers. This approach may work if there are only a few combinations of numbers that we care about. But, this approach becomes more & more difficult as the number of numbers that we care about increases, and we will never be able to memorize every possible combination since there is an infinite amount. Luckily, there is a second approach to this problem, and this is to learn the rule for long addition. Once we learn this fundamental rule then we will always be able to add any two numbers together, even if we have never had them before.

In exactly the same way, there are many fields of knowledge where people have spent a lot of effort trying to memorize every new scenario and piece of evidence that they encounter when they can accomplish more by just learning and understanding a very small number of general principles. Once the general principles are implicit, all the other principles can be derived from them. And the most general principle of the universe is the laws of physics and mathematics. It is only the study of fundamental laws of physics which made possible many technologies that were unimaginable to our ancestors but that we now rely on in our everyday lives.

As another example, a Global positioning satellite can operate properly only by taking into account the equations of General Relativity for how gravity affects the rate at which time flows. There is another important reason for learning about the fundamental laws of physics that go well beyond their practical usefulness. Curiosity about the nature of the universe we live in. and this curiosity may take us to discoveries far beyond our wildest imagination. As an example, Newton’s laws accurately predicted the behaviour of objects here on earth, such as the trajectory of cannon balls, and his laws also accurately predicted the orbits of the planets. All planets except for two Uranus and Mercury. Uranus had loopholes in its orbit that deviated from what Newton predicted.

Writtten By: **Nirmalsinh Abada,** Batch 2018-22, Mechanical, FTE MSUB

It was then theorized that these irregularities may be due to the gravitational attraction on Uranus by another planet beyond Uranus's orbit that had not yet been discovered. Calculations were performed, based on Newton's law of gravity, to determine where the location of such a new planet would have to be in order to explain these irregularities in Uranus's orbit. When the telescope was then pointed in this direction, they did indeed discover a new planet, exactly where the calculations had predicted. This planet was named Neptune! The ability of Newton's Theory to predict the existence of a planet before it was even observed! But, there was still the issue of mercury.

Nevertheless, just as an explanation consistent with Newton's law of gravity was found for the orbit of Uranus, it was believed that one day in the future, a similar explanation would be found for this explanation, which never came. At beginning of the 20th century, for reasons completely unrelated to the orbit of Mercury, Albert Einstein developed the General Theory of Relativity. Einstein's theory was able to make all the same correct predictions that Newton's Theory was able to make, but unlike Newton, Einstein also correctly predicted the orbit of the planet Mercury Einstein's Theory of General Relativity didn't just make better predictions. It stated that the true nature of Time & Space are far more mysterious than anything any science fiction writer has ever been able to come up with. For example, Einstein's Theory of Relativity states that there is no universal moment of time called "now" that everyone can disagree on whether or not two events happen at the same time, and no observer is more correct than any other.

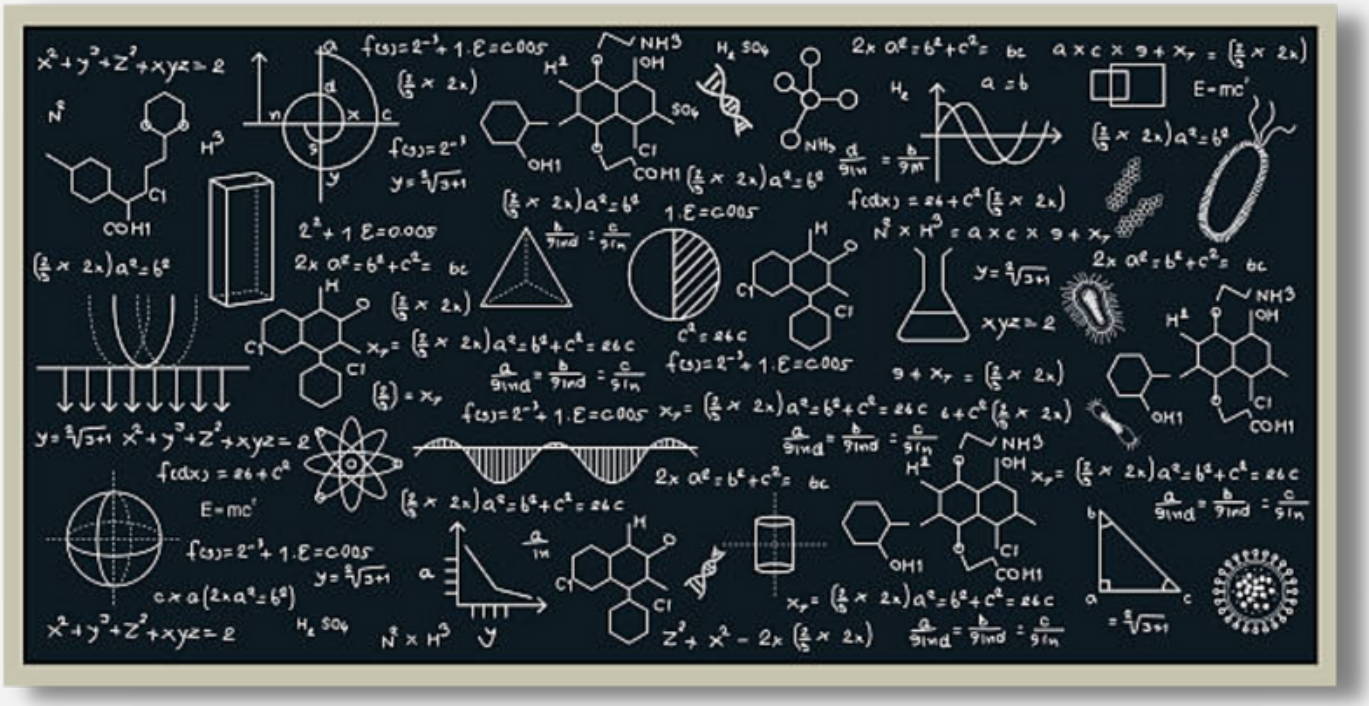


Image Courtesy: iStock, Getty Images

Two different observers can also each believe that the other person's clock is running slower than their own, and they would both be equally correct. And both observers would be equally correct in believing that they are standing still and that the rest of the universe is moving around them. The predictions of General Relativity have been tested numerous times in many different ways. For example, atomic clocks here on the ground, and they decay times of particles which are at rest relative to us.

The results of the experiment have always been exactly what Einstein's theory predicted. But, just as Newton's theory was not initially able to fully explain the behaviour of Uranus or Mercury, there are also two phenomena that Einstein's theory is not presently able to fully explain. We have called these two phenomena "Dark energy" & "Dark matter". Dark matter'' deals with the fact that the amount of matter we are able to observe in each galaxy is far less than what it would need to possess in order to for the galaxy to hold the Galaxy together, given the Galaxy's rate of rotation. "Dark energy" deals with the fact that the rate of expansion of the Universe is accelerating, rather than slowing down, as we would have expected.

Perhaps these two phenomena may one day be explained similarly to the orbit of Uranus was explained. Uranus didn't really violate Newton's laws, and it was simply to take into account the presence of another planet, Neptune, that we previously didn't know about. Similarly, the existence of Dark Matter, for example, may simply be due to the presence of subatomic particles that we don't yet know about, and Einstein's General Theory of Relativity would not be violated. On the other hand, it could also be that Dark Matter & Dark Energy is instead analogous to the orbit of Mercury. The orbit of Mercury was evidence we had all along that Newton's laws of motion gave an incomplete picture of the true nature of time & space.

Similarly, Dark Matter & Dark Energy may be evidence already in our possession that the true nature of reality is far more remarkable, and even far more mysterious, than anything we can presently imagine in the confines of General Relative and Quantum mechanics.

[21] STUDENTS' TESTIMONIALS

Image Courtesy: iStock, Getty Images

This year MIIC did a wonderful work right from aptitude test , internship , seminar and Workshop. I really feel that I gained a lot of knowledge. Team MIIC did a marvelous job. **(Abhishek Sonawane)**

Arranged Industrial visits that is big big initiative, provides Internships. Manages Aptitude tests with solutions was also very good initiative Conducted so many sessions regarding personality, resume development and foreign country future related session so it will help us in taking decisions accordingly. Very big initiative MIIC Team had conducted C2C (Campus To Corporate) before core company came, So it will obviously help us. Also conducted seniors to juniors sessions it also helps us a lot. So much thanks to MIIC Team to gave their valuable time for us and keep it up so surely it will help us and to our Juniors. **(Aditya Vyas)**

First of all I am thankful to team MIIC. MIIC really helps me to improve my soft skills and to aware about industrial environment through industrial visits and internship. By the weekly aptitude tests I got a strong grip in reasoning. Also MIIC has increased my knowledge by experts talk, technical sessions and many other activities. Thank you! **(Bharatsinh Sodha)**

It is very helpful organization. You guys have done amazing work. And it could be much more better by doing aptitude test take by single topic after some day interval. And other things are good. Thanks to all of you guys to make easy way to campus to corporate journey. **(Bhuva Shubham)**

MIIC is doing great work for us. We are very happy and satisfy with MIIC's work. Keep going. Thank you! **(Chauhan Parth)**

MIIC has always been doing a great job and that's they are continuing. It's a pleasure for me to be a part of Mechanical engineering department which is having MIIC. They are doing great job. The session they have arranged were also well organized & well disciplined. **(Dev Gheewala)**

Best organizer, highly benefited through MIIC. Thank you! **(Dhairya Swami)**

It was very useful to us in our academics. It helped to learn something new and get new experience. **(Gamit Dhruv Narottambhai)**

MIIC team is doing very good work in many ways, I like the work they do in industry visit and also a presentation competition. Also it is good that they are working on other different work like sessions and workshops. **(Kanjariya Mohan)**

MIIC is very best platform for helping to students in placement. Thank you! **(Makwana Rahul)**

As a diploma student, when i got the admission in directly 2nd year, at that time I didn"t had an idea about what "MIIC" is and what it is about. But after few days when I attended the introductory session, I realised that how beneficial it is. Many activities like, Expert sessions, industry visits, seminars, internships etc. are being conducted by the team MIIC on frequent basis for the development of the mechanical students. Recently, MIIC also organised a very important event "campus to corporate", fortunately, i was also the part of that event and learned the lots of things about the behavioral and soft skills. So, i would like to thank and appreciate the whole MIIC team for putting such a great effort in development of the me as well as all the students of the mechanical dept. **(Modhavadiya Sanjay)**

It is a remarkable feat of MIIC to shape the students from the third year itself by organising events pertaining to the evolvement of the theoretical aspects of engineering in a practical approach. The initiatives like industrial visits, aptitude and technical mock tests, internships and campus to corporate will play a vital role in students academic & professional career. We are glad to have such an organisation in our dept for overall nurture of students. **(Mudreka Mithaiwala)**

I was excited about MIIC since my first year of B.E.. Although, in the third year, I was able to get the maximum benefit of programs conducted by MIIC. All the Workshops, Expert Talks and Industrial Visits organised, helped in widening the scope of engineering knowledge gained in classroom. MIIC also helped me in getting summer internship. At the end, it made students industry ready which is the exact goal of MIIC. One of the greatest strength of MIIC is that it is managed by student members who can and have worked relentlessly in conducting all the activities. **(Ninad Pandya)**

It is good organization. It was very helpful for students. Really MIIC have worked great appreciated. **(Raulji Rajdipsinh)**

MIIC doing excellent work. From providing 100% internship, arranging experts talk, organize Workshop which all were brilliant. **(Saurav Hadiya)**

Thank you for being one of the most remarkable teaching cell for the students of Mechanical Department. From Internships to Industrial visits, & Seminars to Interview preparation, we learned a lot from MIIC in all the possible way to represent ourselves as a professional engineer in corporate world. Thanks to the team MIIC. **(MD Sarfaraz Anwer)**

MIIC is very helpful for placement. MIIC4U Application which provides study materials which are very useful in exams. MIIC organized webinar, seminar, industrial visit and session with export etc. Aptitude test is also taken by MIIC for placement preparation. **(Savariya Ketan)**

MIIC is doing a good job. C2C workshop was very helpful. A lot has been learned from this five day workshop. Thank you MIIC. **(Suvagiya Vishal)**

MIIC is giving very grateful and such a amazing opportunities for learning and knowledge, and the work of this Organization is also very excellent. Thank you! **(Thummar Dhaval)**

Mechanical Industrial Interaction Cell (MIIC) was started with an initiative to provide the effective opportunities to the students to develop the skills beside the technological knowledge they have and now I see that the team has led the initiative into challenges to reach the peak for continuous progress of the student. The significance of the MIIC seems through the activities which they conducted like industrial visit, aptitude tests, Technical Sessions by the students etc .But from all different activities I most liked C2C workshop which was really a great experience for me as I got real scenario of corporate sector and their requirements from us. Thanks to MIIC and supporters for making aware to our improvement area .We are proud of MIIC, because it is For the students and By the students.
(Shah Chandan)

Basically MIIC is like our mentor and helper in our student life. It arranges many seminars, industrial visits, internships and promote students to develop their soft skills. **(Vaghasia Hilkumar)**

MIIC is providing essential support to students who wants to improve their soft skills. Also MIIC members are always ready to help to students. Thank you!
(Vispara Kaushik)

REDEFINING POSSIBILITIES

MIIC

MECHANICAL INDUSTRIAL INTERACTION CELL

TEAM 2021-22

When we help ourselves, we find moments of happiness. When we help others, we find lasting fulfillment.

Image Courtesy: PixaBay

[22]
MIIC TEAM (2021-22)

(MIIC Team Garvit: 2021-23)

M. M. Patel

MANTHAN PATEL

"The unparalleled exposure that MIIC provided its members has invoked a sense of contribution and innovation in each one of us. Leaving no stones unturned is what differentiates between a regular student and a good learner. This, and much more, is what we got to learn at MIIC. MIIC is Mechanical engineering department's flagship community driving the students forward with new skill upgradation and industry exposure. We further aim to pass on the same passion and dedication to the upcoming batch. I take immense pride in being a coordinator at MIIC and thank all the members for making this a memorable experience.

R. H. Prajapati

RIDHAM PRAJAPATI

"Team MIIC is the word that we used very often in messages and posts and the word itself has made me so much to learn and know. You can learn lots of things when you are with good people and so did I from the team from starting Online Sessions to the offline event "C2C" and arranging Industrial visits to internships. Tackling problems in between all of this was awesome. MIIC allowed me to work for the Department, to do things that are needed in it, and to "Redefine Possibilities" for it. This will go on By TEAM MIIC!

S. A

SHISHANT ASNANI

"A year ago, knowing not much of MIIC, I tried to be a part of this organization with an expectation to have that thrill that comes from managing things with a team. After completing my tenure as Coordinator of MIIC I have nothing but sweet memories and satisfaction from the tough challenges that we took on with a common vision of improving the quality of engineers that Mechanical Department produces.

BHAVIN SHIROYA

It was an amazing journey as a MIIC Coordinator. MIIC provides very good platform to student for developing their skills and overall development. MIIC was one of the great part of my college life. It has provided me a chance to work as a team. Working at MIIC, I got to learn how the team plays an important role in any events to make it successful. Thanks MIIC for everything!

HIREN PARMAR

It was an honorary moment for me when I was selected as a MIIC Coordinator. I have never worked in team, MIIC is the platform where I've learnt Team playing. It was a great experience working as a team. MIIC has given me an opportunity to explore on my skills and I've gained the best out of it. Great learning. Thank you MIIC!

NANDISH THACKER

MIIC helped me a lot in the application process of the things which I have learnt during different stages of my life. I am actually glad to be part of such an organisation, where I managed to learn several skills vividly the decision makings. MIIC was a ladder for me to come out of the periodic days having no challanges and thrills.

VATSAL PATEL

MIIC portrayed a gateway for me to step in extra curricular during my college life. Teamwork, corporate essentials, time scheduling and self belief are my earnings through this amazing MIIC Family.

SHARAD PANDEY

The effectiveness of an organisation is felt by gauging it with the time before its existence. Here, as I complete my stint as a coordinator of MIIC, I see an organisation that has laid a strong foundation for the students to grow upon and learn from experience and participation. I had a terrific experience working with a group of amazing people, from teammates and seniors to corporate professionals. It was a great learning experience, and I will be taking back some fond memories to cherish. What this organisation has achieved is second to none. I wish with all my heart that the organisation keeps climbing the ladder of success because it is the giving that we receive. Cheers!

SURENDRA SOLANKI

It was a great pleasure for me to be able to help students of our department by organizing various activities through MIIC. I am honoured that I got an opportunity to be part of hardworking team of MIIC. During this journey, I was able to enhance various professional skills which will help me to grow my career in future. We are all aware that feedback is an important aspect of improving any activity, so I would like to thank all seniors and classmates who actively participated and provided suggestions. I would also like to thank all the professors who are always ready to help MIIC.

YASH RAJGOR

I am very pleased and honoured to describe my experience as a Coordinator at MIIC, which has been great and I feel it is a privilege too. I am fortunate enough to be a part of Team MIIC. The way MIIC is providing and delivering opportunities and such platform to students for enhancing their technical knowledge to the students of 3rd year is appreciated. The exposure students get from the industrial activities carried out by MIIC is remarkable. I am honored to be a part of the organisation and shall try to remain so. MIIC is the brand of mechanical department that defines Industry in very early phase. My best wishes to MIIC to continue it's legacy.

[23]
STUDENT ADVISORY BOARD (2021-22)

(MIIC Team Utkarsh: 2020-22)

ARJAV DESAI

DHAVAL VALA

HIREN MISTRY

KARTIK PATEL

NIMESH MAKWANA

PARSHWA KAMDAR

ROHIT KADACHA

SUJITH NAIR

ZAINUL BHAISAHEB

REDEFINING POSSIBILITIES

MIIC

MECHANICAL INDUSTRIAL INTERACTION CELL

The Mechanical Engineering Department,
Faculty of Technology and Engineering,
The Maharaja Sayajirao University of Baroda