DEPARTMENT OF MECHANICAL ENGINEERING

THE CRANK

E-MAGAZINE | ANNUAL ISSUE - #4, SEPTEMBER 2020

AERONAUTICAL ENGINEER

MECHATRONICS ENGINEER

AEROSPACE ENGINEER

ROYAL-MECH
Mechanical Engineering

AUTOMATION ENGINEER

ROBOTICS ENGINEER

AUTOMOBILE ENGINEER

DESIGN ENGINEER

MARINE ENGINEER

INSIDE THIS ISSUE

ST JOSEPH ENGINEERING COLLEGE
MANGALURU- 575 028

VISION

To be a value based Department committed to excellence in teaching and research, nurturing technically competent and socially responsible engineering professionals.

MISSION

- Providing state-of-the art technical knowledge in Mechanical Engineering.
- Promoting research, education and training in frontier areas of Mechanical Engineering.
- Facilitating faculty development through quality improvement programmes.
- Initiating collaboration with industries, research organizations and institutes for internship, joint research and consultancy.
- Instilling social and ethical values in students, staff and faculty through personality development. programmes.
- Developing innovation in engineering and technology in order to provide beneficial service to the local community.

PROGRAMME EDUCATIONAL OBJECTIVES

- Have sound foundation in mathematical, scientific and engineering concepts necessary to formulate, solve and analyze engineering problems.
- Possess the ability to work as part of teams on multidisciplinary projects.
- Excel in professional ventures with successful careers in industry that meet the needs of national and multinational organizations.
- Exhibit qualities of lifelong learning, professional ethics, and social concerns.

PROGRAMME OUTCOMES

Graduates of the Mechanical Engineering program are able to:

1. Apply the basic knowledge of mathematics, science, thermal, design, manufacturing engineering.
2. Identify, formulate and solve Mechanical engineering problems.
3. Design a Mechanical system that meets desired specifications and requirements.
4. Design and conduct experiments, analyze and interpret data, and report results.
5. Apply modern engineering software tools and equipments to analyze Mechanical engineering problems.
6. Apply engineering solutions in global and societal context.
7. Understand the impact of engineering on society and demonstrate awareness of contemporary issues.
8. Understand the professional and ethical responsibilities.
9. Work in a team of core competence or multidisciplinary teams.
10. Communicate effectively in both verbal and written forms.
11. Apply financial and project management skills in their professional ventures.
12. Demonstrate inquisitiveness, novelty in thoughts and zeal towards lifelong learning.

PROGRAMME SPECIFIC OUTCOMES

Graduates of the Mechanical Engineering program are able to:

- Gain competence to face various competitive examinations and succeed in seeking best opportunities in the corporate world and higher studies.
- Take up research programs on contemporary areas of Mechanical engineering.

Contents

From the Editor's Desk...

Welcome to the fourth annual edition of the Departmental E-magazine "**THE CRANK 2020**" published under the COVID 19 lockdown. As I write this editor's comment, I have just seen a further easing of the government's pandemic restrictions under strict safety conditions.

THE CRANK 2020 has come forth as an attempt to showcase the activities and achievements of the Department during academic year 2019-20. It provides a platform for the minds to express their thoughts and to showcase their creativity. In the successive pages of **THE CRANK 2020** you can see the colorful life of Department of Mechanical Engineering come alive in words and in pictures. It will serve as a record and a reminder of all the activities and achievements of our Department over the period.

As you might imagine, delivering this coverage to you from the beginning of the academic year and across multiple content platforms while we are locked down along with the rest of the world is no easy feat. Our staffs, students and alumni are the smartest, hardest working team and contributed to this magazine. Thanks to all of them.

I am sure this magazine will offer you a well-rounded reader experience with a mix of quick hits and deep dives, opinions and facts. Please feel free to send your feedback and suggestions for improvement.

Happy reading to all.

Dr Sudheer M

Editor – THE CRANK 2020

Messages

The CRANK 2020 – Departmental E-Magazine of Mechanical Engineering, over the years has gained significant readership owing to its attractive design and interesting articles. This edition of The Crank is of added importance considering the COVID-19 pandemic. I believe that the magazine captures the transformation in the Department as the teaching-learning process went online.

The past six months have showcased the resilience and inventiveness of mankind as they continue to fight the pandemic and strive to keep their work going. There have been casualties of the order never seen before. Economic activities have suffered and we are a long way away from recovery. However, as a teaching-learning community, we at SJEC have our work cut out. We have to identify the evolving skill-sets of the future and work towards imparting them to our students. We need to ensure that our students will be ready with the future technologies on graduation. The FESTO Centre for Industrial Automation is one such initiative in the Department of Mechanical Engineering that aims to skill the students in futuristic automation technologies. Also, more needs to be done in promoting entrepreneurial spirit among our students to offset the temporary decline in job opportunities. The incubation activities at SJEC will scale up its activities and work in this regard is ongoing. We at SJEC remain committed to the cause of our students and the pandemic will not affect our resolve to engage in Service & Excellence.

I congratulate the Editorial Board of The Crank for their fantastic work in bringing out this edition successfully during these troubled times. I also express my best wishes to all the readers of The CRANK 2020 and wish them safety and good health.

Rev. Fr Wilfred P. D'Souza
Director - SJEC

"Scientist investigate that which already is; engineers create that which has never been"

- Albert Einstein

I am delighted that the Department of Mechanical Engineering is bringing out its Annual E-Magazine **"THE CRANK 2020"** of the academic year 2019-2020. It is an outlet to express the activities and achievements of the Department in last one year.

It gives me great joy to meet you all through this E-magazine a great way to communicate and be creative. Concentrate on the silver lining amidst the thickest and darkest cloud at present times. We at SJEC family hope to see you all soon refreshed and rejuvenated.

I extend my greetings and best wishes to the editorial committee of **"THE CRANK 2020"** and wish you all happy reading.

Rev. Fr Rohith D'Costa
Asst. Director - SJEC

Department of Mechanical Engineering is one of the most vibrant departments of our prestigious college. As this department is publishing its E-Magazine THE CRANK 2020 I am happy to verbalize my few words of wishes and appreciations.

I am fascinated by the caption, which I happen to read in the mechanical workshop 'Machine has no brain, use your own'. Machines are the products of human intelligence. Growth in the machinery takes place only when there is growth and optimum utilization of human intelligence.

Today in the changing world, we are challenged with many things like; limited resources, climatic changes, natural calamities and above all COVID 19 has posed greatest threat to our growth. New generation Mechanical Engineers need to equip with innovative spirit and great hope to build our nation. Qualified faculty and well equipped department in the college, is very effective in forming future Mechanical Engineers.

I recognize the selfless services of all the faculty and also editorial board in publishing this magazine. Wish you all the best.

Rev. Fr Alwyn Richard D'Souza
Asst. Director - SJEC

"A desire can change nothing, a decision can change something but a determination can change everything".

With the strong determination and the commitment, Department of Mechanical Engineering in our college is known for imparting Holistic Educational Excellence to students. Its determination is evident by the continuous success in various fields.

The Department continues to set the standard for excellence by providing students with a best-in-class out-come based education and hands-on experience through research, training, and student forum activities. Due to COVID19, the Department has had to modify many things and I am truly proud of the efforts they are making to try to make a difference.

It gives me immense pleasure to learn that the E-Magazine of Department of Mechanical Engineering named as "THE CRANK 2020" is about to be unfurled. I extend my hearty congratulations to the entire faculty and students of Department of Mechanical Engineering for their enthusiasm and effort to achieve success throughout the academic year 2019-20.

I am sure that this E-Magazine will be informative and resourceful. I owe my hearty appreciations to the editorial team for their sincere efforts to make the release of this magazine a reality during this pandemic time.

My best wishes to all readers of this E-Magazine.

Dr Rio D'Souza
Principal - SJEC

We began the new academic year 2019-20 with trigger to explore new knowledge, activities and achievements. The ODD semester went on very well as expected. But our experience was different when we entered EVEN semester.

Since the start of 2020, the world has been witnessing a health calamity with uncertain implications. The corona-virus pandemic of COVID 19 has wrought havoc, causing immense damage in terms of loss of human lives as well as financial and economic shortfalls.

The pandemic has significantly disrupted the higher education sector as well, which is a critical determinant of a country's economic future. It was hard to imagine a time like this in the recent history of the planet. In the event of COVID 19, online teaching had become a necessity with a look for innovative solutions in a short period of time. The big challenge for us was to complete the syllabus on time without compromising on the education quality. Needless to say, the pandemic has transformed the centuries-old, chalk–talk teaching model to one driven by technology.

The faculties have taken immediate measures essential to ensure continuity of learning. Open-source digital learning solutions and Learning Management Software were adopted by the teachers to reach out to the students. With the rapid increase of mobile internet use by our students, Department was able to connect with 90% of its students during the lockdown period.

Table. Statistics on online engagement during the lockdown period (Apr-May 2020).

Sl No	Description	Numbers
1	No of synchronous classes conducted	150
2	No of recorded lectures uploaded	490
3	No of assignments given	148
4	No of assessments/quizzes taken	160

Many faculties have adopted inspirational and innovative mobile-based learning models for effective delivery of information to the students. Faculties were able to shift priorities and resources to respond to this unprecedented event and help the student community. Faculties have also upgraded themselves by participating in quizzes, FDPs, workshops, certification courses etc through various e-platforms. I want to thank our dedicated faculty who are working harder than ever to provide the best learning experience to the students.

In this time of crisis, a well-rounded and effective educational practice was adopted by our students. It was amazing to know that lot of students have taken up several Massive Open Online Courses (MOOCs). Majority of the third-year students are undergoing online internship programs. These steps will surely drive their employability, productivity, health, and well-being in the days to come, and ensure their overall progress.

The pandemic had its own effect on job offers for students and on the research work in the Department. It is quite convincing to know that 47 of our final year students are campus placed and Department has shown considerable progress in the field of research.

COVID 19 crisis has spurred some welcome changes. It has taught us is to build resilience to face such threats in the future. The outbreak of Coronavirus has reminded us that change is inevitable. Our traditional focus has been on offline education, we believe a mix of online and offline is what will work in the coming months, which can hopefully be converted to a permanent module. The Department will reconsider the current delivery and pedagogical methods and seamlessly integrate classroom learning with e-learning modes to build a unified learning system in future.

Let us celebrate in our isolation the beginning of a revival in the economy. Stay safe and be upbeat.

I am sure you will have a wonderful experience while reading "THE CRANK 2020". Please share your comments and suggestions for improvement.

Finally, Department of Mechanical Engineering extends sincere gratitude to the respected Principal and the SJEC Management for their support and encouragement in all spheres.

Dr Sudheer M

HOD and Head of Research - ME

Department

ACTIVITIES

ESR Activities

HIGHER EDUCATION

QUICK FACTS

35 FACULTY

8 DOCTORATES

4 FEMALE STAFF

16 FEMALE STUDENTS

47 PLACEMENTS

15 TECHNICAL STAFF

28 MOU'S

610 STUDENTS

E-TIME 2019 – INTERNATIONAL CONFERENCE
09-10 August 2019

The Department organized its Second International Conference under the banner of eTIME-2019 Emerging Trends in Mechanical Engineering, on 09—10 August 2019. The conference was organized in association with AIP Conference Proceedings as Publishing Partner.

Four keynote addresses were presented by speakers from India and abroad. Details are mentioned below:

1. CFD Application in Bio-Medical Engineering

Ir. Dr. Haji Kamarul Arifin Bin Ahmad, Head, Aerospace Malaysia Research Centre, Faculty of Engineering, Universiti Putra Malaysia.

2. Syntactic Foam Composites

Dr Jayavardhan ML Department of Mechanical Engineering, St Joseph Engineering College, Mangaluru.

3. Challenges in the Design and Implementation of Lightweight Electric Vehicles

Dr Anindya Deb, Professor and Former Chair, Centre for Product Design and Manufacturing (CPDM), Indian Institute of Science (IISc), Bengaluru.

4. Research Opportunities in Space Structure Design

Dr Badari Narayan Kennati, Senior faculty, Center of Excellence, A&D, VTU Regional Office, Bengaluru.

Apart from exciting pre-conference workshops, the conference was scheduled to witness 40 papers presented across all tracks.

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TECHNICAL TALK: OPPORTUNITIES IN MERCHANT NAVY FOR MECHANICAL ENGINEERS
05 September 2019

Mr Prathap Rai, visiting faculty from Mangalore Marine College and Technology, Kuppepadav, Mangaluru delivered a presentation on "Opportunities in Merchant Navy for Mechanical Engineers" for the final year Mechanical Engineering students in the Prerana Hall. On 05 Sept 2019.

During presentation, Mr Prathap demonstrated a video on types of ships and the various jobs handled by engineers in the ship. Mr Rai mentioned about various advantages of career at sea. Less competition, high salary, tax free income, high rate of savings, free world trips, international job, versatile practical engineer, no migration from birth place were some of the advantages of becoming marine engineer. Speaker gave idea about career profile at sea ranging from 5/E to 2/E and the necessary training and the experience required at all levels. He shared his marine experience of 15 years and his exposure as a Chief Engineer of the ship. Mr Prathap also mentioned about the post-marine opportunities to take up shore jobs as tech superintendent with shipping companies, surveyors with classification societies, insurance surveyors, port logistics, ship yards and at teaching institutes. The presentation has given students a good idea about career prospectus in merchant navy.

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ESR ACTIVITIES: TECHNICAL TALK @ RUSEMP
18 September 2019

Two faculty from Department of Mechanical Engineering visited RUSEMP Pakshikere and delivered talk for students on 18 Sept 2019. The technical talk was on following two topics:

i. "Refrigeration and Air-Conditioning" by Mr Sharun Mendonca, and

ii. "Industrial Electrical Safety" by Mr Rudolf Charles D'Souza.

Around 15 students were benefited from this technical talk. All participants well appreciated the valuable inputs from the resource persons.

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TECHNICAL TALK
POLYMER COMPOSITES FOR 3D PRINTING
25 October 2019

A technical talk on "Polymer Composites for 3D Printing" by Dr. Jayavardhana M L, Associate Professor, Department of Mechanical Engineering, SJEC, Mangaluru was organised on 25.10.2019 from 2:00 – 5:00 PM under the aegis of IE(India) SJEC Students Chapter. Dr. Raju K has briefed about IE (India) Kolkata, to the students and how Institutional members can avail the project funds from IE(I) under UG R&D Grant Scheme. The guest speaker Dr. Jayavardhana M L has systematically presented the available literature on Polymer Composites and connected it to the current research that is going on in the area of Polymer Composites at NITK, Surathkal. He could relate his work on foams to that of polymer composites and its importance to 3D printing. Apart from the lecture on Polymer Composites, he has briefed about the career opportunities for B.E. students at Kumamoto University, Japan. Second year students from Mechanical Engineering have greatly benefitted from the talk.

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INTERACTIVE SESSION: PLASTIC WASTE MANAGEMENT
29 November 2019

An interactive session on "Plastic Waste Management" was jointly organised by Department of Mechanical Engineering and Industry and Innovation Group of the college on 29 Nov 2019 at 12 Noon at Prerana Hall. The resource person for the talk was Mr Vijaya Kumar V, President of Karnataka State Plastic Association and spoke on various aspects of Plastic Waste Management. Staffs and students across the Departments have actively participated in the interactive session.

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TEQIP 1.3 SPONSORED FIVE-DAY FACULTY DEVELOPMENT PROGRAM
Outcome Based Education and NBA Accreditation
30 December 2019 – 03 January 2020

TEQIP 1.3 Sponsored Five-Day Faculty Development Program (FDP) on Outcome Based Education (OBE) and NBA Accreditation for faculty members of engineering institutes was organised from 30 December 2019 to 3 January 2020. The FDP was organized in association with Visvesvaraya Technological University (VTU)-Belagavi, Aryabhatta Knowledge University-Patna, Biju Patnaik University of Technology-Rourkela.

The five-day FDP included sessions on effective implementation of OBE from several perspectives. More specifically, it was intended to address the implementation of the OBE system at affiliated institutions. Specific responsibilities of institution-level administrators, heads of individual programs and individual faculty were addressed through specially designed interactive sessions. Several sessions on OBE and NBA accreditation were scheduled on all five days of the program. The resource persons for the FDP were Dr Umakanth P Kulkarni, Professor & Head, Department of CSE at SDM College of Engineering and Technology-Dharwad, Dr ESM Suresh, Professor & Head, Department of Civil Engineering at NITTTR-Chennai, Dr Rio D'Souza, Principal of SJEC, Dr Shreeranga Bhat, Internal Quality Assurance Cell (IQAC) Coordinator at SJEC, Mr Sathyendra Bhat J and Mr Ragesh Raju, Assistant Professors-MCA at SJEC and Dr Claire Komives, Professor, Department of Chemical Engineering at San Jose State University USA and Secretary of Indo Universal Collaboration for Engineering Education (IUCEE).

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ESR ACTIVITIES: TRAINING ON ICT TOOLS FOR SCHOOL TEACHERS
April – July 2020

Information and Communication Technologies (ICTs), which are playing a key role in creating this knowledge society, can also support the quality of school education by helping children and teachers to access and use digital learning resources, create local curricular resources and connect to one another for peer learning and networking. The COVID 19 lockdown has mandated the use of such digital online tools for the school teachers to connect with their students. However, it is well known that schools have been late adaptors to ICTs in teaching-learning process. To bridge the gap and help the teachers of schools and colleges, faculty from Mechanical Engineering SJEC have joined their hands in the college efforts to educate and train the school teachers on using several available ICT tools for education during COVID 19 pandemic.

Name of the Faculty members involved: Dr Binu K. G., Mr Alister D'Souza, Mr Sharun Mendonca, Mr Vijay V. S., Mr Vinoothan Kaliveer.

Topics Covered:

Google Classroom, Google Forms, Google Meet, Record and upload video in YouTube, Flip Grid, Quizz, Active Presenter, Google Suite on Phone, EdPuzzle, MS One Note, MS PowerPoint narration recording, Pen Tablet, CISCO WebEx, Google Site, Google Accounts creation and settings, Google Input tools, Google Drive, Video recording and uploading, WhatsApp Web etc.

Sl No	Name of the Schools/ Colleges	No of Teachers Trained
1	St Aloysius Pre-University College, Mangaluru	40
2	Mount Carmel Central School, Konchadi, Mangaluru	35
3	St Mary's English Medium School, Udupi	22
4	St Raymond Pre-University College, Vamanjoor	35
5	Ambika Bala Vidhyalaya & Pre-University College, Puttur	20
6	Shubhodaya Vidhyalaya, Moodushede	22
7	Lourdes Central School, Bejai	20
8	Infant Jesus English Medium School, Mangaluru	17
9	Ladyhill Victoria High School, Ladyhill, Mangaluru	17
10	SMS English Medium School, Brahmavar	41
11	Lion's Special School, Surathkal	10

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ONLINE FDP: PLC PROGRAMMING AND INDUSTRIAL INTERFACE
22 - 24 June 2020

Three-Day Online Faculty Development Programme on "PLC Programming and Industrial Interface" in association with Indwell Automation - Pune was held from 22 - 24 June 2020 with Mr Himanshu Kumar, Director - Indwell Automation as the Resource Person.

Day - 1 commenced with an introduction to controllers and then moved on to PLC programming. With his immense experience in PLC programming, Mr Himanshu was able to get the participants engaged in PLC programming using Codesys software, very quickly. With a series of poll questions, he was able to obtain feedback from participants and keep them engaged.

In Day-2, the participants were exposed to Latch, Flag, and Timer. Practical examples were used to drive home the concepts. The participants were taken through the process of writing PLC programs using Codesys that involves the use of the above three concepts: Latch, Flag, and Timers.

Day-3 of the FDP continued the PLC programming with respect to counters. An elaborate discussion on CTU, CTD and CTUD was presented. The resource person then demonstrated the input/output connections of a Mitsubishi PLC and showcased the process of receiving a preloaded program from the PLC, live-editing of a program while the PLC is under operation, etc.

Overall, the FDP provided clear insights on PLC Programming and provided the participants with a sound understanding of the basics to build upon. The sessions were interspersed with poll questions, homework, and quizzes to keep the participants engaged and focused. A total of 87 participants from various parts of the country received the participation certificate by participating in the final quiz and feedback session.

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WEBINARS CONDUCTED
June-August 2020

SL NO	DATE	Activities Conducted	Resource Person
1	16 Jun 2020	A webinar on "Smart Factory Automation with Digital Twin and Live Demonstration on SKILLON 365" was conducted in association with MTAB Technology Centre Pvt Ltd Chennai with Mr Aravind , Senior Manager , MTAB Technology Pvt Ltd as Resource person for faculties and students.	
2	29 Jun 2020	A webinar on "Scope in Automotive Industry" was conducted in association with Elite Techno Groups with Mr Sunder Iyer who is having 7+ Years' Experience in R &D HONDA ,Volvo USA as resource person for students and faculties.	
3	11 Jun 2020	A webinar on "Career opportunities in Aerospace and Defense Sector" in association with Centre of Excellence in Aerospace and Defense (COEAD), Bengaluru by Dr K Badari Narayan, Mr. Nicky Harris and Mr. Chethan as resource persons for III year Mechanical Engineering students.	
4	17 Jul 2020	A webinar on "Introduction to Industrial Automation" was conducted in association with FESTO Bengaluru with Mr. S. Sendilkumar, Training Manager - Festo India, as the main Resource Person for students and faculties.	
5	28 Jul 2020	A Webinar on using "MathWorks Tools to Teach Online" was conducted in association with MathWorks – India with Mr Dhruv Chandel Mr Amith Kamath, as resource persons for students and faculties.	  **Mr Amith Kamath** **Mr Dhruv Chandel**
6	04 Aug 2020	A webinar on "Introduction to SOLIDWORKS" was conducted in association with CADD CENTRE by Mr Shivaprakash K P ,Tech Leader at CADD CENTRE as Resource person for all students and faculties.	

Career Opportunities and Higher Education Abroad
Series of Talk in Association with Office of Collaborations SJEC

1. Higher Studies Abroad

An information session on "Higher Studies Abroad" was held focusing on various options and opportunities by Mr Manoj Gosavi, Branch Manager, IDP, Mangaluru for all final year students on 5 September 2019**.** Guest speaker said, studying abroad is a global phenomenon, with students crossing countries, continents and oceans to get the best education possible. But why has choosing a university destination in another country become so popular? The truth is, studying overseas has many fantastic benefits, from helping students find a good job to improving their social life**.**

2. US University Fair

'US University Fair', a half-day interaction event for all the final year engineering of who plan to study abroad was organized on 18 Sept 2019. The Directors of Admission and Recruitment from highly reputed and ranked US universities participated in the fair. They guided more than 100 interested students on STEM programs, application for universities, scholarships availability and post study career opportunities in the US. Students are eligible to apply for scholarships worth US $ 7 million. Some of the universities that participated in the fair are New York University, Tandon School of Engineering, USC Viterbi School of Engineering, George Washington University School of Engineering and Applied Science, Indiana University, School of Informatics, Computing and Engineering, University of California, University of California, Irvine – Samueli School of Engineering, University of South Florida.

The fair also had international destination expert of Quacquarelli Symonds from Mumbai Office, who worked with the students and helped them take effective decisions regarding their higher education options.

3. Internship in Abroad Countries

Mr Kushagrr Rastogi from AIESEC M.A.H.E delivered a talk on "Internship in Abroad Countries" on 30 Sept 2019 for second- and third-year engineering students. The key areas of focus for this informative talk were: To provide students with insights on different internship avenues in the multi-disciplinary projects based on the sustainable development goals set by the UN in different regions across the world. To inform students about internship and entrepreneurship opportunities in global start-ups. To educate the students on the process for enrolling in the ongoing and upcoming short-term projects in different countries. Through the knowledge on the various projects, the workshop, in addition, also provided students an exposure to current social issues across the world.

4. How to Write Successful Statement of Purpose

A talk on "How to write a Successful Statement of Purpose for overseas higher education application process" by Ms Priya K, Branch Manager, Planet Education, Udupi was organised on 21 October 2019 for the final year engineering students. Speaker mentioned that a good SOP stands out and attracts the admissions committee which wades through hundreds of applications. The 8 Ps that make an SOP special are personal touch, purpose, passion, preparedness, potential, planning, plain English and positivity.

5. Free Education in ITALY

The speaker of the event was Mr Jireh Sikha, Founder, Jireh Pathway Abroad, Mangalore addressed the final year students on 22 Oct 2019. Speaker said that Italy is a popular destination for international students. Many Universities are offering best amenities for Indian Students who want to study abroad. It offers quality higher education with more affordable tuition fees than other Western European countries. From last few years, Italy is offering 100% Scholarship and Sponsorship to students wishing to study and settle in Europe. This is a great opportunity for students to launch their career with a world class education and global employment prospects.

6. European Universities Fair

'European Universities Fair', a half-day interaction event for all the final year engineering students, who plan to pursue higher studies abroad was organised on 7 Nov 2019. Some of the universities that participated in the fair are Durham University (UK), Imperial College London (UK), Universidade Nova de Lisboa (Portugal) and Ecole Polytechnique (France).

7. Higher Education, IELTS and Personality Development Program

A program to motivate third year Engineering students, to pursue Higher Education Abroad, IELTS - International English Language Test System and on issues of Personality Development was conducted on 8 February 2020.

The resource persons were Dr Guru Tej and Dr Fancisa Tej, Co-Founders and CAOs of Wisdom Academy Mangalore, Bangalore and Jaipur.

Dr Guru Tej dealt with areas of Personalities – 1. Self-discovery 2. Acquiring qualities 3. Learning and Development Interventions 4. Adaptation to the Situations 5. Classification of Personality based on Attitude/ Behavior 6. Psychometric test/ Demonstration.

Dr Francisa Tej spoke on preparation, Training, conduct of exams, relevance and importance of world's most preferred language proficiency test – IELTS and GRE.

8. CIVIL SERVICES – Plan Prepare Perform

A half day awareness program on CIVIL SERVICES – Plan Prepare Perform was organised on 15 February 2020 in association with the Department of CIVIL Services Training- St Aloysius Institute of College (SAC), Mangalore for interested students. Resource persons encouraged and motivated the students to take up competitive exams and consider CIVIL Services as career on par with Engineering, Medicine and Teaching. Speakers also expressed the role of SAC in helping, coaching, training and guiding the students in this regard. Presentation included tips for clearing the papers in preliminary exams, strategies to clear the main exam with high marks, the method to select the optional papers, to be effective and successful in the Personality Test (Interview), to inculcate the habit of reading the newspapers, the technique to cover the NCERT syllabus and to write good essays in simple English etc.

9. Overseas Education Fair -2020

Overseas Education Fair -2020, one day interaction/ Counselling session for all the third and final year engineering students of the Mangaluru region who are planning to study abroad was held on 17 February 2020. Mr Manoj Gosavi, the Branch Manager, Mr Shijomon Yesudhas, the Business development Manager IDP Mangaluru and seven counsellors for different destinations like UK, U.S.A, Australia, Canada, New Zealand, Ireland conducted the program.

Counsellors helped/guided/clarified the doubts of the students in the areas of eligibility criteria, methods/procedures, academic calendars to apply, scholarships availability, most wanted branches of higher education in terms of employability and post -study visa (PR) etc. The representative of the ICICI Bank were also present to enlighten the students with regard to the options of education loan, eligibility, terms and conditions of repayment etc.

10. Higher Education in European Countries

A talk-cum-interaction session in the areas of higher education opportunities in European Countries was held on 20 February 2020. The resource person has addressed the students answering all their query and clarifications, selection of universities option of scholarships, earn while study schemes and the post study-stay arrangements etc.

Ministry of Department Faculty

International Journal Papers:

1. **Chiranth B P**, Siddaraju. C, Mishra.R.K, Sasikumar.R, Sathiskumar.R., T. Ram Prabhu, "High Temperature Wear Behavior of the ZE41 Mg Alloy", Materials Science Forum, Vol. 969, August 2019, pp 86-92.
2. **Sudheer M**, Ravikiran Kamath, "On tribological behavior of synthetic fiber reinforced Polymer composites modified with fillers: a review", International Journal of Mechanical and Production Engineering Research and Development, Volume 9, Issue 5, Oct 2019, pp 71-80.
3. **Shreeranga Bhat,** Rio D'Souza, Sathyendra Bhat, Ragesh Raju, and **Pavana Kumara B** (2020). "Effective Deployment of Outcome Based Education: Strategies based on Motivational Models", Journal of Engineering Education Transformation, Vol. 33, pp. 164-169.
4. Sathyendra Bhat, Ragesh Raju, **Shreeranga Bhat,** and Rio D'Souza (2020). "Enhancing the Teaching-Learning Process through Collaborative Learning". Journal of Engineering Education Transformation, Vol. 33, pp. 185-191.
5. **Shreeranga Bhat**, Jiju Antony, E.V. Gijo, Elizabeth A. Cudney (2020), "A Multiple Case Study Analysis from the Indian Context", International Journal of Quality & Reliability Management, Vol. 37 No. 1, pp. 90-111.
6. **Shreeranga Bhat,** Rio D'Souza, Sathyendra Bhat, Ragesh Raju, and **Binu K G** (2020). "Collaborative Learning for Outcome Based Engineering Education: A Lean Thinking Approach", Procedia Computer Science, Vol. 172, pp. 927-936.
7. **Binu K. G.**, **Vijay V. S.**, Anusha M. M., Anoop C. V, **Shreeranga Bhat,** and Rio D'Souza (2020). "Influence of Epistemic Curiosity on the Study Approaches of First Year Engineering Students", Procedia Computer Science, Vol. 172, pp. 443-451.
8. Sathyendra Bhat, Ragesh Raju, **Shreeranga Bhat,** and Rio D'Souza (2020). "Redefining Quality in Engineering Education through the Flipped Classroom Model", Procedia Computer Science, Vol. 172, pp. 906-914.
9. Vinayambika S. Bhat, **Shreeranga Bhat,** Gijo E. V. (2020), "Application of Robust Engineering Approach for DC Motor Controller Design", International Journal of Advanced Science and Technology, Vol. 29 No. 7, pp. 11275-11282.
10. **Shreeranga Bhat**, Gijo E. V., Vinayambika S. Bhat, (2020), "Production Enhancement and Sustainment through Lean Six Sigma Strategy", International Journal of Mechanical and Production Engineering Research and Development, Vol. 10, pp. 376–384.
11. Sanketh Ramachandra, Anindya Deb, **Purushothama Chippar** "A CAE-Based Methodology for Designing a Fuel Cell Stack for Electric Vehicle Applications", International Journal of Advanced Science and Engineering, Vol.6, January 2020, No. S2, pp. 35-42.
12. **Swaraj D. Lewis**, **Purushothama Chippar,** "Numerical investigation of hydrogen absorption in a metal hydride reactor with embedded embossed plate heat exchanger", Energy 194, March 2020, 116942.
13. Josny Joy, Jiji Abraham, Jesna Sunny, **Jinu Mathew**, Soney C. George, "Hydrophobic, superabsorbing materials from reduced graphene oxide/ MoS_2 polyurethane foam as a promising sorbent for oil and organic solvents", Polymer Testing, Volume 87, 2020, 106429.
14. Manisha Kottary, Sachin U, **Noel Deepak Shiri,** Athira Vijayakumar, Manoj N, Vaishak, "An Experimental study on Coconut fiber reinforced concrete with partial replacement of fine aggregate by plastic waste", International Research Journal of Engineering & Technology, Vol 07, Issue 06, June 2020, pp 6224-6230.
15. **Raghavendra Prasad S.A**, "Rubber Tapping Machine", International Research Journal of Engineering and Technology (IRJET), Volume: 07 Issue: 06 | June 2020, pp. 1235-1238.
16. **Raghavendra Prasad S.A**, "E-Teaching/ learning: An advancement in Indian engineering education system", International Journal of Research and Analytical Reviews, IJRAR June 2020, Volume 7, Issue 2, pp. 166-168.

International Conference Papers:

1. **Binu K. G.**, **Vijay V. S.**, Anusha M. M., Anoop C. V, **Shreeranga Bhat**, and Rio D'Souza (2020). "Influence of Epistemic Curiosity on the Study Approaches of First Year Engineering Students", Presented in the 9th 'World Engineering Education Forum (WEEF 2019)', powered by International Federations of Engineering Education Societies, organized by Vellore Institute of Technology Chennai held on 13-16 November 2019.
2. **Shreeranga Bhat**, Rio D'Souza, Sathyendra Bhat, Ragesh Raju, and **Binu K. G.** (2019). "Collaborative Learning for Outcome Based Engineering Education: A Lean Thinking Approach". Presented in the 9th 'World Engineering Education Forum (WEEF 2019)', powered by International Federations of Engineering Education Societies, organized by Vellore Institute of Technology Chennai held on 13-16 November 2019.
3. Sathyendra Bhat, Ragesh Raju, **Shreeranga Bhat,** and Rio D'Souza (2019). "Redefining Quality in Engineering Education through the Flipped Classroom Model", Presented in the 9th 'World Engineering Education Forum (WEEF 2019)', powered by International Federations of Engineering Education Societies, organized by Vellore Institute of Technology Chennai held on 13 -16 November 2019.
4. Sathyendra Bhat, Ragesh Raju, **Shreeranga Bhat,** and Rio D'Souza (2020). "Enhancing the Teaching-Learning Process through Collaborative Learning", Presented at the 7th International Conference on 'Transformations in Engineering Education (ICTIEE - 2020), powered by Indo-Universal Collaboration for Engineering Education (IUCEE)', organized by Anurag Group of Institutions, Hyderabad, on 5-8 January 2020.
5. **Shreeranga Bhat,** Rio D'Souza, Sathyendra Bhat, Ragesh Raju, and **Pavana Kumara B** (2020). "Effective Deployment of Outcome Based Education: Strategies based on Motivational Models", Presented at the 7th International Conference on 'Transformations in Engineering Education (ICTIEE - 2020)', powered by Indo-Universal Collaboration for Engineering Education (IUCEE), organized by Anurag Group of Institutions, Hyderabad, on 5-8 January 2020.
6. Vinayambika S Bhat, **Shreeranga Bhat,** Gijo E V (2020). "Application of Robust Engineering Approach for DC Motor Controller Design". Presented at the Global Conference on 'Advanced Smart and Sustainable Technologies in Engineering (GCASSTE-2020)', organized by Mangalore Institute of Technology and Engineering, Moodabidri, Karnataka, held on 30-31 Jan 2020.

7. Ajay Noronha, **Shreeranga Bhat** and **Suma Bhat** (2020). "Application of Lean Six Sigma-TRIZ Methodology in Product Development". Presented at the Global Conference on 'Advanced Smart and Sustainable Technologies in Engineering (GCASSTE-2020)', organized by Mangalore Institute of Technology and Engineering, Moodabidri, Karnataka, held on 30-31 Jan 2020.
8. Deiel Roshni Noronha, Shyam Kishore, Suprabha Padiyar, Nithin Baby, Ajay Noronha, **Shreeranga Bhat**, and Suma Bhat (2020). "Simulation Framework for Electric Bike Operating in Pedal Assist Mode Using Co-Simulation Approach". Presented at the Global Conference on 'Advanced Smart and Sustainable Technologies in Engineering (GCASSTE-2020)', organized by Mangalore Institute of Technology and Engineering, Moodabidri, Karnataka, held on 30-31 Jan 2020.
9. Ajay Noronha, **Shreeranga Bhat** and **Suma Bhat** (2020). "Study on Lean Six Sigma Sustainability in Dental Colleges". Presented at the Global Conference on 'Advanced Smart and Sustainable Technologies in Engineering (GCASSTE-2020)', organized by Mangalore Institute of Technology and Engineering, Moodabidri, Karnataka, held on 30-31 Jan 2020.
10. **Shreeranga Bhat,** Vinayambika S Bhat, Gijo E V (2020). "Production Enhancement and Sustainment through Lean Six Sigma Strategy". Presented at the Global Conference on 'Advanced Smart and Sustainable Technologies in Engineering (GCASSTE-2020)', organized by Mangalore Institute of Technology and Engineering, Moodabidri, Karnataka, held on 30-31 Jan 2020.
11. **Chiranth Bellur Prabhakar, Santhosh Hanumanthe**, Hanumanthlal Shivanna Naik, and **James Valder** ,"Effect of content of SiC on Al 6061 processed through stir casting". AIP Conference Proceedings 2236, 040015 (2020); https://doi.org/10.1063/5.0006825 Published Online: 20 May 2020.
12. **Vijay Vailaya Shashidhar**, "Effect of using fins in cooking vessel to improve heat transfer rate". AIP Conference Proceedings 2236, 030008 (2020); https://doi.org/10.1063/5.0006788 Published Online: 20 May 2020.
13. **Canute Sherwin, Suma Bhat,** and Sudheendra P. Hebbar, "A brief review on nickel and chromium coatings developed by electrochemical route". AIP Conference Proceedings 2236, 040007 (2020); https://doi.org/10.1063/5.0006832 Published Online: 20 May 2020.
14. **Shreeranga Bhat**, Amith Kumar Pai, Arun Kumar, Advaith Ellath Valappil, and Gururaj Rao, "Deployment of lean manufacturing in a di shop: An ASRS approach". AIP Conference Proceedings 2236, 050004 (2020); https://doi.org/10.1063/5.0006790 Published Online: 20 May 2020.
15. **Swaraj Dominic Lewis, Purushothama Chippar**, and Anindya Deb, "Numerical study of hydrogen absorption in a metal hydride tank embedded with multiple U-shaped cooling channel". AIP Conference Proceedings 2236, 030004 (2020); https://doi.org/10.1063/5.0006858 Published Online: 20 May 2020.
16. **Jayavardhana Makkatty Lingappa**, "Mechanical characterization of glass microballoon filled HDPE syntactic foams". AIP Conference Proceedings 2236, 040020 (2020); https://doi.org/10.1063/5.0006864 Published Online: 20 May 2020.
17. Ravikiran Kamath Billady, and **Sudheer Mudradi**, "Influence of filler incorporation on the mechanical and wear behaviour of synthetic fiber reinforced polymer matrix composites- A review". AIP Conference Proceedings 2236, 040001 (2020); https://doi.org/10.1063/5.0006881 Published Online: 20 May 2020.
18. **Jinu Mathew, Rahul Kumar**, Manu Mathew, and Soney C. George, "A study on graphene based elastomer with TiO2 and Ni nanoparticles". AIP Conference Proceedings 2236, 040014 (2020); https://doi.org/10.1063/5.0007065 Published Online: 20 May 2020.
19. Keegan Deon Santhmayor, **Noel Deepak Shiri**, Inas Asiya, Myriam Shankar Krafft, and Wolfram Thurm, "Development of water filtration unit for waste water generated from waste plastics recycling machines". AIP Conference Proceedings 2236, 050009 (2020); https://doi.org/10.1063/5.0007039 Published Online: 20 May 2020.
20. Mohammed Al Tamash Sheikh, Kenny Pritish Solomon Pereira, **Binu Kottoor Gopalakrishna, and Kandavalli Raju**, "Design and fabrication of automated prosthetic arm". AIP Conference Proceedings 2236, 070003 (2020); https://doi.org/10.1063/5.0007070 Published Online: 20 May 2020.
21. Kenny Pritish Solomon Pereira, Mohammed Al Tamash Sheikh, and **Ravikantha Prabhu**, "Modeling and analysis for wear performance of coconut shell powder filled glass fiber composite using Taguchi approach". AIP Conference Proceedings 2236, 040012 (2020); https://doi.org/10.1063/5.0007090 Published Online: 20 May 2020.
22. **Rolvin DSilva, Binu Kottoor Gopalakrishna**, Raison DSouza, **Vinoothan Kaliveer**, and Thirumaleshwar Bhat, "Empirical study of engine performance and emission parameters using Python module". AIP Conference Proceedings 2236, 030006 (2020); https://doi.org/10.1063/5.0007072 Published Online: 20 May 2020.
23. **James Valder**, Rijesh. Malayathodi, Prashanth Kumar, Saminathan Rajasekaran, **Kandavalli Raju**, and Attukalathil Orongil Surendranathan, "Effect of plastic strain and processing routes on the hardness of as-cast aluminum". AIP Conference Proceedings 2236, 040017 (2020); https://doi.org/10.1063/5.0007404 Published Online: 20 May 2020.
24. **Sushanth Harischandra Gowda**, **Ramya Moodakere**, **Joel Dmello**, and **Kandavalli, Raju** "Influence of injection timing engine in performance and emission using milk scum biodiesel blends on CI". AIP Conference Proceedings 2236, 030005 (2020); https://doi.org/10.1063/5.0007455 Published Online: 20 May 2020.
25. **Vinoothan Kaliveer**, Abhishek Umesh Bangera, Ajoy Joseph Winston Farias, Ahmed Sinan, Elstin Terrance Cardoza, **Kandavalli Raju**, and **Rolvin Sunil DSilva**, "Effect of injection pressure on the performance and emission characteristics of blends of magnetite in waste cooking oil biodiesel on CI engine". AIP Conference Proceedings 2236, 030007 (2020); https://doi.org/10.1063/5.0007722 Published Online: 20 May 2020.
26. **Vinoothan Kaliveer,** Rajath Ramachandra, Pavan Kumar, Prajwal, Manish Santhosh Shetty, and **Rolvin DSilva**, "Recycling and conversion of waste PET bottles into acrylic paints". AIP Conference Proceedings 2236, 040019 (2020); https://doi.org/10.1063/5.0007730 Published Online: 20 May 2020.
27. **Prathviraj Hoigebazar**, and **James Valder**, "Analysis and comparison of compound parabolic solar concentrator configurations for box type solar cooker". AIP Conference Proceedings 2236, 030003 (2020); https://doi.org/10.1063/5.0007928 Published Online: 20 May 2020.
28. **Yathish Kumar Kulal**, Thushar Attavara, Samhan Ahmed, Abdullah Shakir Munaz, Aqib Mohamood Badimoole, **Ashwin Shetty**, and **Vinoothan Kaliveer**, "Portable wall-putti applying machine". AIP Conference Proceedings 2236, 050008 (2020); https://doi.org/10.1063/5.0010371 Published Online: 20 May 2020.

29. **Yathish Kumar Kulal**, Anand Chennabasappa Moraba, Deekshith, Dilan, Shobith Kumar, **Ashwin Shetty**, and **Vinoothan Kaliveer**, "Automatic tyre inflation system for heavy vehicles". AIP Conference Proceedings 2236, 050010 (2020); https://doi.org/10.1063/5.0010372 Published Online: 20 May 2020.
30. **Rolvin D'Silva**, Thirumaleshwara Bhat, "Effect of TiO_2 Nano additives on Emission Combustion and Performance Parameters of CI Engine with Pongamia biodiesel blends", International Conference on Emerging Trends in Science and Engineering (ICETSE)-2020 SMVITM Bantakal, July 10-11, 2020.
31. **Sharun Mendonca**, **Ravikantha Prabhu** and Thirumaleshwara Bhat. "Experimental analysis of Influence of Injection Timing on Compression Ignition Engine with biodiesel and nanoparticles blend" International Conference on Emerging Trends in Science and Engineering (ICETSE)-2020 SMVITM Bantakal, July 10-11, 2020.
32. **Mr Canute Sherwin** has presented the paper entitled "Effects of Current Density on Surface Morphology and Coating Thickness of Nickel Plating on Copper Surface" in the 2nd International Conference on "Sustainable Urban Development, Resource Conservation and Food Security" hosted from Bearys Knowledge Campus on 6-8, August 2020.

National Journal:

1. **Mr Prathviraj** filed a patent titled "Mutually opposite and coaxially rotating armature and field coils type electric generator" and was published in the Official Journal of Patent Office, India, Issue No. 24/2019 dated 14 June 2019.

Workshops/STTPs/FDPs/Seminars attended:

1. Mr Akshay N. H. has attended a 3 day workshop on "Digital Marketing foundation for businesses and Start ups" from 4 to 6 September 2019, organized by Jyothy Institute of Technology Bengaluru.
2. Mr Rolvin DSilva, Mr Noel Deepak Shiri, Mr Ravikantha Prabhu, Mr Chiranth B.P, Mr Canute Sherwin, Mr Poornesh M., Mr Swaraj Lewis have participated in "Scopus & Mendeley: Tools for Empowering Research" held on 21 Sept 2019 organized at SJEC Mangaluru.
3. Dr Sudheer M, Dr Jayavardhana M L, Mr Noel Deepak Shiri have participated in the VTU consortium training programme on " E-resources for Academic Excellence" organized by VTU consortium, VTU Belagavi in collaboration with SJEC held at SJEC Mangaluru on 20 Sept 2019.
4. Mr Yathish Kumar attended National conference (NATCON 2019) on "India's Changing Paradigm: Skills and Entrepreneurship for Global Competitiveness" during September 25 - 27, 2019 at GKVK Campus, Bengaluru.
5. Mr Noel Deepak Shiri has attended a workshop on "Plastic Waste Management" organized by CIPET and KASSIA in KASSIA Auditorium, KASSIA Udyog Bhavan, Bangaluru on 02 Oct 2019.
6. Dr Sudheer M has attended the "Cyber Safe Campus" workshop held at SJEC Mangaluru on 21 Oct 2019.
7. Dr Binu K. G. Mr Canute Sherwin have attended Two-Day Workshop on "Enhancing Skills in Mechatronics Environment", jointly organized by FESTO India Pvt. Ltd and Indian Machine Tool Manufacturers' Association Bengaluru from 23-24 October 2019 at IMTMA Automation Lab, BIEC, Tumkur Road, Bengaluru.
8. Dr Shreeranga Bhat has attended One-day workshop on "New NAAC Accreditation Process for Engineering Colleges" on 25 October 2019 organized by V.T.U. Regional office, Bengaluru.
9. Mr Yathish Kumar attended Bengaluru Tech Summit 2019-An international celebration of innovation and technology, at Palace Ground Bengaluru from 18-20 November 2019.
10. Mr Vijay V. S. has participated in Two Day "Regional Research Symposium on Problem Based Learning (RRSPBL-2019)" on 22 and 23 November 2019.
11. Mr Yathish Kumar has participated in Faculty Development Program on "Entrepreneurship" organised by Manipal College of Health Professions, MUTBI from 2-14 December 2019.
12. Dr Suma Bhat attended FIVE days FDP on "Modeling fundamentals and PYTHON for numerical simulation and applied artificial intelligence for mechanical engineering systems research" , organised by Dept of Mechanical Engineering , NMAMIT, Nitte during 18-22 Dec 2019.
13. Mr Prashanth Kumar, Mr Joel D'Mello, Mr Poornesh M. have participated in VTU TEQIP 1.3 Sponsored Five-Day Faculty Development Program (FDP) on "Outcome Based Education (OBE) and NBA Accreditation" held from 30 December 2019 to 3 January 2020 organized by Department of Mechanical Engineering, SJEC Mangaluru.
14. Dr Binu K. G. has attended a workshop on "Project Based Learning" held at Anurag Group of Institutions on 5 January 2020 as part of the 7th International Conference on Transformations in Engineering Education.
15. Mr Rahul Kumar has attended Five Day FDP on "Teaching and Learning" held from 13/01/2020 to 17/01/2020 organized by St Joseph Engineering College, Mangaluru.
16. Mr Rolvin DSilva, Mr Joel D'Mello, Mr Sushanth G, Mr Chiranth B.P, Mr Santhosh H, Mr Raghavendra S A, have participated in One Day FDP on "Engineering Ethics", Organized by Department of Civil Engineering at SJEC Mangaluru on 18 January 2020.
17. Mr Prashanth Kumar, Mr Prathviraj H, Mr Chiranth B.P have participated in 4 days FDP on "Design Thinking and Social Entrepreneurship" from 22-25 January 2020 held at St Joseph Engineering College, Mangaluru.
18. Mr Noel Deepak Shiri has attended "Global Sustainability Seminars", ElitePlus – Plastivision, 2020 Knowledge Terminal, from 16th - 20th January 2020, Global Sustainability Seminars, The Grande, Bombay Exhibition Centre, Goregaon, Mumbai, India.
19. Mr Rahul Kumar has attended a two day FDP on "Research Conclave- A step towards collaborative research" from 27 Jan to 28 Jan, 2020 organized by Industry and Innovation Cell of St Joseph Engineering College, Mangaluru.
20. Mr Yathish Kumar has attended SAEINDIA BAJA 2020 at NATRIP Pithampur, Indore - MP from 24-29 January 2020.

21. Mr Sushanth G, Mr Rahul Kumar, Mr Joel D'Mello, Mr Raghavendra S A, have participated in a 4 day FDP on "Critical Thinking and Social Innovation, Automation Basics/Demo" held at St Joseph Engineering College, Mangaluru during 27-30 January 2020.
22. Dr Binu K. G, Dr Jayavardhana M.L, Mr Noel Deepak Shiri, Mr Ravikantha Prabhu, Mr Chiranth B.P have attended "Interactive Meet on Future Trends in Manufacturing" on 30 January 2020, organized by Industry Interaction Cell of the Department of Mechanical Engineering at SJEC in association with Indian Machine Tool Manufacturers Association IMTMA - Bengaluru.
23. Mr Rahul Kumar has attended a two day workshop on "e-Yantra Lab Setup Initiative (eLSI) " from 14 Feb to 15 Feb, 2020 at NITK, Surathkal.
24. Dr Sudheer M, Dr Shreeranga Bhat, Mr Prathviraj H. have attended TEDx-SJEC Program on 16 February 2020 organized by St Joseph Engineering College, Mangaluru.
25. Dr Jayavardhana M L, Mr Noel Deepak Shiri have participated in One Day Workshop on "Startups" held on 19/02/2020, organized by Manel Srinivas Nayak Memorial Besant Institute of Postgraduate Studies in Association with Kanara Chamber of Commerce and Industry.
26. Mr Noel Deepak Shiri has participated in the Interaction session and talk on "Indian Economy: Challenges & Opportunities" by Padma Bhushana Sri Tarun Das, Chairman, Institute of Economic Growth & Former Mentor & Director General, Confederation of Indian Industry (CII) on 28th February 2020 at KCCI Chamber Building, Bunder, Mangaluru.

Online Workshops/STTPs/FDPs attended:

1. Dr Sudheer M has successfully completed the online NPTEL-AICTE Faculty Development Program on "Soft Skills", Jul-Oct 2019 (12 weeks) with a consolidated score of 73%.
2. Dr Sudheer M, Dr Raju K, Dr Purushothama Chippar, Dr Binu K G, Dr Jayavardhana M L, Mr Rolvin D'Silva, Mr Prathviraj H, Mr Ravikantha Prabhu, Mr Noel Deepak Shiri, Mr Sushanth H , Mr Chiranth B P, Mr Pavana Kumara B, Mr Swaraj Dominic Lewis, Ms Ramya M, Mr Vinoothan Kaliveer, Mr Poornesh M, Mr Rahul Kumar, Mr Joel D'Mello, Mr Canute Sherwin, Mr Akshay N H, Mr Jinu Mathew, Mr Santhosh H have attended Three - Day Online Faculty Development Programme on "PLC Programming and Industrial Interface " organized in association with Indwell Automation – Pune conducted by Department of Mechanical Engineering at SJEC Mangaluru from 22-24 June 2020.
3. Dr Sudheer M, Dr Shreeranga Bhat, Dr Binu K G have participated in Virtual IUCEE Annual Leadership Summit held during 10-12 July 2020, organized by Indo-US Collaboration for Engineering Education (IUCEE), USA.
4. Dr Sudheer M, Dr Raju K, Dr James Valder, Dr Binu K G, Dr Jayavardhana M L, Mr Sampath Kumar, Mr Prashanth Kumar, Mr Rolvin D'Silva, Mr Prathviraj, Mr Rudolf D'Souza, Mr Vijay V S, Mr Ravikantha Prabhu, Mr Noel Deepak Shiri, Mr Sushanth H G, Mr Swaraj Lewis, Mr Yathish Kumar, Ms Ramya M, Mr Vinoothan Kaliveer, Mr Ashwin Shetty, Mr Poornesh M, Mr Rahul Kumar, Joel D'Mello, Mr Canute Sherwin, Mr Alister D'Souza, Mr Akshay N H have participated in One Week Online FDP on "Insights on writing research proposals and funding opportunities" organized by Research and Facilities group SJEC Mangaluru from 20-24 July 2020.
5. Dr Sudheer M has successfully completed one-week FDP on "ICT Tools for online teaching, learning and evaluation" conducted by Department of E&E, VVCE Mysuru held during 27 July to 01 August 2020.
6. Dr Sudheer M, Mr Rudolf D'Souza, Mr Canute Sherwin, Mr Akshay N H have attended "FESTO Virtual Exhibition" organized by FESTO India Pvt Ltd Bengaluru held on 16 and 17 July 2020.
7. Dr Raju K, Dr James Valder, Mr Sharun Mendonca have attended FDP on "Application of thermal engineering" from 08.06.2020 – 12.06.2020 at Kings Engineering College, Sriperumbudur, Chennai.
8. Dr Raju K. has attended FDP (International) on "Potential research areas in Mechanical Engineering" from 15.06.2020 – 20.06.2020 by Vignan Institute of Technology and Science, Hyderabad.
9. Dr Raju K. has attended FDP on "Advanced materials technology" from 01.07.2020 -05.07.2020 by MCE, Hassan.
10. Dr Raju K. has attended FDP on "Recent advances in Mechanical Engineering: A research perspective" from 06.07.2020 – 10.07.2020 by Mahatma Gandhi Institute of Technology, Hyderabad.
11. Dr Raju K. has attended FDP on "Recent advances in Renewable energy and energy efficiency technologies" from 21.07.2020 – 25.07.2020 by Mahatma Gandhi Institute of Technology, Hyderabad.
12. Dr Raju K, Dr James Valder have attended FDP on "Developments in reducing environmental pollution: Bio-fuels and thermo acoustic refrigeration" from 29.07.2020 – 31.07.2020 by RBYM Engineering College, Ballari.
13. Dr Raju K , Dr James Valder have attended FDP on "Optimization techniques for Mechanical Engineers" from 27.07.2020 – 01.08.2020 by VITS, Hyderabad.
14. Dr Raju K. has attended FDP (International) on "Essential technologies and career opportunities in Mechanical Engineering" from 27.07.2020 – 01.08.2020 by Universal Engineering College, Thrissur, Kerala.
15. Dr Shreeranga Bhat has attended a two day online workshop on 'Patent Drafting and Processing with Importance of Trademark and Copyright 'on 8-9 May 2020 organized by Centre for Leadership and Human Resource Development, Mangaluru.
16. Dr Shreeranga Bhat, Mr Rolvin D'Silva have attended three days online workshop on "Design of Experiments: An Engineering perspective" on 22-24 April 2020 organized by Journal of Advanced Engineering Research, India.
17. Dr Purushothama Chippar has attended online session on "National Innovation and Startup Policy Implementation for nominated faculty of HEIs" on 5 August 2020 at 10:30 AM- 1:30 PM.
18. Dr James Valder has attended FDP on "Critical Thinking and Social Innovation – Automation Basics / Demo" from 27.01.2020 – 30.01.2020 at SJEC, Mangaluru.

19. Dr Binu K.G. has attended Five-Day Virtual Faculty Development Program on "Digital Tools for Smart Manufacturing Systems (DTSM 2020") held from 6 to 10 July 2020, organized by the Center for Automation, School of Mechanical Engineering, Vellore Institute of Technology - Vellore (VIT).
20. Dr Binu K.G. has attended Six-Day Faculty Development Program on "Robotics and Automation" from 13 - 18 July 2020, organized by the Center for Automation, School of Mechanical Engineering, Vellore Institute of Technology - Vellore (VIT).
21. Dr Binu K.G, Mr Vijay V S have attended One-Week Faculty Development Program on "MATLAB for Mechanical Engineers" organized by the Department of Mechanical Engineering at BMS College of Engineering in association with ISTE BMSCE Chapter during 20-24 July 2020.
22. Dr Binu K.G. has attended Two-Days FDP on "Teaching Students Design Experiments and Project Based Learning" organized by the Civil Engineering Department of SJEC on 13-14 January 2020.
23. Dr Binu K. G. has attended "Virtual Alumni Meet - Coffee and Conversation with the Crew (Reimagine and Re-Engineer your Choices)" organized by the SJEC Committee for Alumni Affairs on 25 July 2020.
24. Dr Binu K. G. has attended a Live Online training programme on "Robot Programming and Operation - Industry Perspective" (Duration 3 hours) organized by Indian Machine Tools Manufacturers Association IMTMA – Bengaluru on 12 June 2020.
25. Dr Jayavardhana M.L has participated One Week Online Faculty Development Programme on "Technological Advancements in Mechanical Engineering, TAME-2020" held on 29-06-2020 to 03-07-2020 organized by Department of Mechanical Engineering , Balaji Institute of Technology & Science, Laknepally, Narsampet, Warangal.
26. Dr Jayavardhana M.L has participated in Six Days Online Faculty Development Programme on "Nanomaterial Synthesis, Process, Characterization and its Functional Applications" held from 06-07-2020 to 11-07-2020 organized by the Department of Automobile Engineering, Hindusthan College of Engineering and Technology, Coimbatore.
27. Dr Jayavardhana M.L has participated in One Week Online International Virtual Workshop on "Materials Characterization Using DMA" held on 06-07-2020 to 10-07-2020 organized by the Department of Automobile Engineering, Hindusthan College of Engineering and Technology, Coimbatore.
28. Dr Jayavardhana M.L has attended a webinar on "Improving Research Planning Skills at Technical Institute" held on 28/04/2020 organized by St. Joseph Engineering College, Mangalore.
29. Dr Jayavardhana M.L has attended a webinar on "Problem-based Megaprojects: Complex problem-solving competences and interdisciplinarity in higher education" held on 07/05/2020 organized by St. Joseph Engineering College, Mangalore.
30. Dr Jayavardhana M.L has attended a webinar on "Online Tools/Utilities to Keep the Online Sessions More Interactive & Engaged Smartly" held on 20/05/2020 organized by IUCEE Virtual Academy and St. Joseph Engineering College, Mangalore.
31. Dr Jayavardhana M.L has attended a webinar on "Problem -Based Learning and Mathematics at University" held on 21/05/2020 organized by St. Joseph Engineering College, Mangalore.
32. Dr Jayavardhana M.L has successfully completed a National E-quiz on "Design of Machine Elements"" held on 07/03/2020 organized by Department of Mechanical Engineering, Maharaja Institute of Technology, Mysore.
33. Dr Jayavardhana M.L has successfully completed a Quiz on "Programmable Logic Controller" held on 11/06/2020 organized by Smt Kamala and Sri Venkappa M. Angadi College of Engineering and Technology, Lakshmeshwar.
34. Dr Jayavardhana M.L has successfully completed an E-Quiz on "Kinematics of Mechanisms and Machines" held on 11/06/2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
35. Dr Jayavardhana M.L has successfully completed a Quiz on "Engineering Mechanics" held on 12/06/2020 organized by Department of First Year Engineering, Pune Vidyarthi Griha's College of Engineering, Nashik.
36. Dr Jayavardhana M.L has successfully completed an E-Quiz on "Start-up, Innovation and IPR" held on 12/06/2020 organized by the Institution's Innovation Council of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi.
37. Dr Jayavardhana M.L has successfully completed a Quiz on "Basics of Indian Economy" held on 13/06/2020 organized by Department of Commerce, S. G. Govt. Degree & PG College, Piler.
38. Dr Jayavardhana M.L has successfully completed a E-Quiz on "Personality Development" held on 14/06/2020 organized by Department of Mechanical & Civil Engineering, Proudhadevaraya Institute of Technology,T. B. Dam, Hosapete.
39. Dr Jayavardhana M.L has successfully completed a Quiz on "Renewable Energy Source" held on 14/06/2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
40. Dr Jayavardhana M.L has successfully completed an E-Quiz on "Automobile Industries in India" held on 16/06/2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
41. Dr Jayavardhana M.L has successfully completed an E-quiz on "Fluid Power System" held on 30/06/2020 organized by Department of Mechanical Engineering, STJ Institute of Technology, Ranebennur.
42. Dr Jayavardhana M.L has successfully completed an E-Quiz on "Engineering Graphics" held on 30/06/2020 organized by Department of Mechanical Engineering, ANURAG Engineering College, Telagana.
43. Mr Prashanth Kumar participated in Two-Weeks Faculty Development Programme on "Managing Online Classes and Co-Creating MOOCS" from April 20 – May 06, 2020 organised by Teaching Learning Centre, Ramanujan College, University of Delhi.
44. Mr Prashanth Kumar participated in Online Faculty Development Programme on "Basics of Research " organized by IQAC, Government First Grade college Punjalkatte, Belthangady on 23 May 2020.
45. Mr Sampath Kumar has attended VTU FDP in Engineering Analysis for Thermofluids Research Challenges using ANSYS from 27th to 31st July 2020 at VTU Department of Mechanical Engineering, Kalaburagi.

46. Mr Rolvin DSilva has attended a two day online workshop on “Fuzzy Logic and Neural Network Approaches for Engineering Solutions”, held on 1st and 2nd May 2020 organized by Journal of Advanced Engineering Research.
47. Mr Rolvin DSilva has attended five days International FDP on “Emerging Research Areas in Engineering”, organised by RM Institute of Science and Technology, Ramapuram Campus, Chennai-600089, from 5th June to 9th June 2020
48. Mr Rolvin Dsilva, Mr Prashanth Kumar, Mr Prathviraj H , Mr Vijay V S, Mr Noel Deepak Shiri, Mr Ravikantha Prabhu, Mr Sushanth H G, Mr Sharun Mendonca, Mr Swaraj Dominic Lewis, Mr Yatish Kumar, Ms Ramya M, Mr Vinoothan Kaliveer, Mr Ashwin Shetty, Mr Poornesh M, Mr Rahul Kumar, Mr Joel D’Mello, Mr Canute Sherwin have attended 4 Days Live Webinar on “Research Methodology and Data Analysis” held from 17 to 20 June 2020 organized by Karnataka Science and Technology Academy (KSTA) Bengaluru.
49. Mr Prathviraj H. has attended Technical E-quiz 2020 on “Mechanical measurements and Metrology” organized by Dept of ME, CEC, Mangaluru held during June 2020.
50. Mr Vijay V. S. has participated in the online workshop on Universal Human Values on the theme “Inculcating Universal Human Values in Technical Education” during 2-6 May, 2020 organized by All India Council for Technical Education(AICTE) New Delhi.
51. Mr Vijay V. S. has participated in the online FDP on “Applications of Thermodynamics” by Dept of Mechanical Engineering PESITM, Shimogga from 13 to 17 July 2020.
52. Mr Noel Deepak Shiri has attended the Online Workshop on “Intellectual Property Rights College / University - Faculty & Researchers”, Pandit Deendayal Petroleum University on April 10, 2020.
53. Mr Noel Deepak Shiri has attended the Five days online Faculty Development Program on “Manufacturing, Machining and Testing of Composites” organized by the Department of Mechanical Engineering at Sri Sai Ram Institute of Technology from 15-19 June 2020.
54. Mr Noel Deepak Shiri has attended Short Term Course on 'Management of Small And Medium Enterprises' organized by Entrepreneurship Development and Industrial Coordination Department at National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh, India under the MHRD, Govt of India from 06-10 July 2020.
55. Mr Sushanth G, Mr Joel D’Mello have participated in KNIMBUS online training on “Effective utilization for research publication through KNIMBUS digital library” held on 8 June 2020 organized by YIT, Moodbidri.
56. Mr Chiranth B.P has attended five days of online FDP on “Novel materials and its industrial applications” held on 13 to 18 May 2020 by Karpagam College of Engineering, Coimbatore.
57. Mr Chiranth B.P has attended a one-day online workshop on “Awareness on industrial safety during Covid 19” held on 23 May 2020 at S.A. College of Engineering, Chennai.
58. Mr Chiranth B.P has attended a three-day online faculty development program on “Enhancing the quality of academic and sponsored research” held on 04 to 06 June 2020 at K.L.N College of Engineering, Chennai.
59. Mr Chiranth B.P, Mr Swaraj Lewis have attended one-week online FDP on “Technological Advancements in Mechanical Engineering, TAME-2020” held on 29 June to 03 July 2020 at Balaji Institute of Technology & Science, Laknepally, Telangana.
60. Mr Chiranth B.P has attended a one-week online faculty development program on “Advanced Materials, Machining and Characterization” held on 06 to 10 July 2020 at Sir M Visvesvaraya Institute of Technology, Bengaluru.
61. Mr Sharun Mendonca has attended a two days online workshop on “Fuzzy Logic and Neural Network Approaches for Engineering Solutions” held from 3rd to 4th May 2020 organized by Journal of Advanced Engineering Research.
62. Mr Sharun Mendonca has attended a two days online workshop on “Computer Aided E Analysis Using Hypermesh And Deform 3D” held from 16 to 17 May 2020 organized by Journal of Advanced Engineering Research.
63. Mr Sharun Mendonca has attended a two days online workshop on “Patent Drafting and Processing with Importance of Trademark and Copyright” held from 8 to 9 May 2020 organized by Journal of Advanced Engineering Research.
64. Mr Sharun Mendonca has attended a One-day online workshop on “Awareness On Industry Safety During COVID 19” held on 23 May 2020 organized by S A Engineering college, Chennai.
65. Mr Pavana Kumara B has undergone STTP on “NAAC Awareness Programme for Faculty” held from 08/05/2020 to 14/05/2020 organized by Marathwada Mitra Mandal Institute of Technology (MMIT), Pune.
66. Mr Swaraj D Lewis has attended a one-week FDP on “Engineering Analysis for Thermo-Fluid Research Challenges using Ansys” held from 27 July to 31 July 2020 organized by VTU Dept. of Mechanical Engineering, Kalaburagi.
67. Mr Ashwin Shetty has attended Online STTP on "Rural Development Through Technical Institution” from 29th July to 02nd Aug 2019 organized by NITTTR Kolkata.
68. Mr Ashwin Shetty has attended 3 days Online Techno Legal Summit for CAP (Cyber, AI, and Patents) from 3-6 Aug 2020 jointly organized by IQAC, SJEC Mangaluru and SDM Law College Mangaluru.
69. Mr Poornesh M has attended Three Day online Faculty Development Programme on “Post COVID-19 Resurgence of Indian Industry and R & D” organized by IARE-TIIC from 18th to 20th May 2020
70. Mr Poornesh M has attended Five Day online Faculty Development Programme on “Emerging Engineering Materials” organized by Ballari Institute of Technology & Management from 1st to 5th June 2020.
71. Mr Poornesh M has attended Three Day online Faculty Development Programme on “Advances in Machining Process” organized by PES Institute of Technology & Management from 17th to 19th June 2020.
72. Mr Canute Sherwin has attended a online quiz on “Refrigeration and Air Conditioning” organized by Department of Mechanical Engineering, CHH Sahu College of Engineering, Aurangabad.

73. Mr Canute Sherwin has attended a online quiz on “Thermal Engineering” organized by Department of Mechanical Engineering, Sri Krishna Institute of Technology, Bengaluru on 23 May 2020.
74. Mr Akshay N H attended a Two-Day FDP “ Online Tools for Teaching” during 13-14 May 2020 organized by North Storm Academy.
75. Mr Raghavendra Prasada S.A has successfully completed the online quiz on “CAD/CAM/CIM” organized by Department of Mechanical Engineering, ATME College of Engineering, Mysuru, from 21 July to 23 July 2020.
76. Mr Raghavendra Prasada S.A has successfully completed the online quiz on “Elements of Mechanical Engineering” conducted by Department of Mechanical Engineering, KIT Neeumarga Mangaluru from 08 to 10 July 2020.

Online Quizzes attended/completed:

1. Dr Jayavardhana M.L has successfully completed a National E-quiz on “Design of Machine Elements”” held on 07/03/2020 organized by Department of Mechanical Engineering, Maharaja Institute of Technology, Mysore.
2. Dr Jayavardhana M.L has successfully completed a Quiz on “Programmable Logic Controller” held on 11/06/2020 organized by Smt Kamala and Sri Venkappa M. Angadi College of Engineering and Technology, Lakshmeshwar.
3. Dr Jayavardhana M.L has successfully completed an E-Quiz on “Kinematics of Mechanisms and Machines” held on 11/06/2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
4. Dr Jayavardhana M.L has successfully completed a Quiz on “Engineering Mechanics” held on 12/06/2020 organized by Department of First Year Engineering, Pune Vidyarthi Griha’s College of Engineering, Nashik.
5. Dr Jayavardhana M.L has successfully completed an E-Quiz on “Start-up, Innovation and IPR” held on 12/06/2020 organized by the Institution’s Innovation Council of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi.
6. Dr Jayavardhana M.L has successfully completed a Quiz on “Basics of Indian Economy” held on 13/06/2020 organized by Department of Commerce, S. G. Govt. Degree & PG College, Piler.
7. Dr Jayavardhana M.L has successfully completed a E-Quiz on “Personality Development” held on 14/06/2020 organized by Department of Mechanical & Civil Engineering, Proudhadevaraya Institute of Technology,T. B. Dam, Hosapete.
8. Dr Jayavardhana M.L has successfully completed a Quiz on “Renewable Energy Source” held on 14/06/2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
9. Dr Jayavardhana M.L has successfully completed an E-Quiz on “Automobile Industries in India” held on 16/06/2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
10. Dr Jayavardhana M.L has successfully completed an E-quiz on “Fluid Power System” held on 30/06/2020 organized by Department of Mechanical Engineering, STJ Institute of Technology, Ranebennur.
11. Dr Jayavardhana M.L has successfully completed an E-Quiz on “Engineering Graphics” held on 30/06/2020 organized by Department of Mechanical Engineering, ANURAG Engineering College, Telagana.
12. Mr Prathviraj H. has attended Technical E-quiz 2020 on “Mechanical measurements and Metrology” organized by Dept of ME, CEC, Mangaluru held during June 2020.
13. Mr Canute Sherwin has attended a online quiz on “Refrigeration and Air Conditioning” organized by Department of Mechanical Engineering, CHH Sahu College of Engineering, Aurangabad.
14. Mr Canute Sherwin has attended a online quiz on “Thermal Engineering” organized by Department of Mechanical Engineering, Sri Krishna Institute of Technology, Bengaluru on 23 May 2020.
15. Mr Raghavendra Prasada S.A has successfully completed the online quiz on “CAD/CAM/CIM” organized by Department of Mechanical Engineering, ATME College of Engineering, Mysuru, from 21 July to 23 July 2020.
16. Mr Raghavendra Prasada S.A has successfully completed the online quiz on “Elements of Mechanical Engineering” conducted by Department of Mechanical Engineering, KIT Neeumarga Mangaluru from 08 to 10 July 2020.
17. Mr Noel Deepak Shiri has attended e-Quiz on "Automobile Industries in India" on the 16 June 2020 organized by School of Mechanical Engineering, REVA University, Bengaluru.
18. Mr Noel Deepak Shiri has attended e-Quiz on " Additive Manufacturing (15ME82)" on the 10th July 2020 organized by Dept of Mechanical Engineering, Canara Engineering College, Benjanapadavu, Mangaluru.
19. Mr Noel Deepak Shiri has attended e-Quiz on "6 years of My Gov" organized by MyGov, Govt of India on the 30 July 2020.
20. Mr Noel Deepak Shiri has attended e-Quiz on "Atmanirbhar Bharat - Swatantra Bharat Quiz" organized by Ministry of Defense, Govt of India and MyGov, Govt of India on the 29 July 2020.
21. Mr Noel Deepak Shiri has attended e-Quiz on "Insolvency and Bankruptcy Code Quiz", organized by Insolvency and Bankruptcy Board of India and MyGov, Govt of India on the 31 July 2020.

Few notable webinars:

1. IFEES Webinar on “Making Engineering Appealing to the Next Generation" on 14 Aug 2019.
2. IUCEE-St Joseph Engineering College Webinar Series: Leveraging OBE for Quality Assurance in an Affiliated College on 24 Sept 2019.
3. IUCEE-St Joseph Webinar Series: Successful Partnership in our Journey towards Autonomy: The SJEC-IUCEE Story on 17 Dec 2019.
4. IFEES Global Webinar "Tomorrow, “everything” will be able to "see ``,"think ``,"do ``, and communicate with “everything else” on 23 Jan 2020.
5. IUCEE webinar on “Remote Internship Program” on 27 March 2020.

6. IUCEE webinar on "SUSTech Experience on Online Teaching and Learning" on 30 March 2020.
7. IUCEE webinar on "Preparing for Change – When Pedagogy Needs Technology at Times of Crises" on 01 April 2020.
8. IUCEE webinar on "A Scalable Approach to Distance Learning Available Today! " on 06 April 2020.
9. Higher education of future – Future engineering education and prospect organized by, NMAMIT, NITTE on 09 June 2020.
10. E-Vehicle, Kings Engineering College, Sriperumbudur, Chennai on 18 June 2020.
11. Composites for beginners, VITS, Hyderabad on 09 July 2020.
12. Progress of nano-materials and its application in new technologies, AMC-EC, Bengaluru on 13 July 2020.
13. A practical approach on Industry 4.0 and its implementation in smart factories, MGIT, Hyderabad on 26 July 2020.
14. Launching new Product in 100 days from concepts to Manufacturing, Dassault Systems Foundation, India on 18 June 2020.
15. "Capacity Building on NBA Criteria 1-10" organized by STEMVOGEL Consultancy Pvt Ltd, and Aggarwal Edu. Solution on 27 June 2020.
16. Patent Prosecution Challenges and Strategies organized by TURNIP on 25 July 2020.
17. Transition from Thermo-Chemical (IC Engines) to Electro-Chemical system (Fuel Cells) - The Future of Energy Conversion Systems, organized by the Department of Mechanical Engineering at AJIET - Mangaluru on 11 July 2020.
18. Industrial Applications of CAD/CAE/CAM organized by the Department of Mechanical Engineering at PES Institute of Technology and Management, Shivamogga on 20 July 2020.
19. Emerging Trends in the Post-COVID World – Role of AI and ML organized by ICFAI Business School, Bangalore, on 21 June 2020.
20. Employability Post Covid Era: Expectations of Industry Vs Education System's preparedness organized by ASSOCHAM on 11 July 2020.
21. Kitchen Ventilation Systems organized by National Skill Development Corporation (NSDC) and Dhanush Eng. Services Pvt. Ltd. on 27 June 2020.
22. Preparing Open Book Examination for Engineering Courses Centre For Engineering Education (CEE) Universiti Teknologi Malaysia on 02 July 2020.
23. AI in Mechanical Engineering organized by IMechE - Victoria Australia on 11 July 2020.
24. Avenues for E-learning in post COVID scenario organized by SMVITM, Bantakal on 12 June 2020.
25. 'Big data and COVID 19' organized by McGrow Hill on 06 July 2020.
26. "Making Students Industry Ready" organized by Centre of Excellence A&D, Bengaluru on 15 May 2020.
27. "Refrigerants in Engineering Applications" organized by VVCE, Mysore on 22 June 2020.
28. Effective utilization of online resources using Knimbus Platform organized by SMVITM Bantakal, Udupi on 09 Jun 2020.
29. "Insights to Industry 4.0" organized by S.A. Engineering College, Chennai on 29 May 2020.
30. "A step towards enkindling Atma Nirbharata in our youths in Higher Educational institute " organized by IEEE Bangalore section as a part of IEEE Bangalore Learning series on 12 June 2020.
31. "Composite for Beginners" organized by the Department of Mechanical Engg- VEGAN Institute of Technology and Science, Hyderabad Telangana 09 July 2020.
32. "Insight to INDUSTRY 4.0" organized by Department of Mechanical Engineering, S. A. College, Chennai on 29 May 2020.
33. "Making students Industry Ready" organized by Dassault systems associated with VTU and K-Tech on 15 may 2020.
34. Fundamentals of manuscript preparation, organized by Researcher Academy, Elsevier on 10 June 2020.

Table: Number of webinars attended by the faculty 2019-20

Sl No	Name	Webinars	Sl No	Name	Webinars
1	Dr Sudheer M	24	16	Mr Chiranth B. P.	10
2	Dr Raju K.	41	17	Mr Sharun Mendonca	03
3	Dr Shreeranga Bhat	02	18	Mr Pavana Kumara B.	11
4	Dr Chippar	04	19	Mr Swaraj D. Lewis	16
5	Dr James Valder	17	20	Mr Yathish Kumar K.	02
6	Dr Binu K.G.	14	21	Ms Ramya M.	11
7	Dr Jayavardhana M L	11	22	Mr Vinoothan Kaliveer	05
8	Mr Prashanth Kumar	09	23	Mr Ashwin Shetty	03
9	Mr Rolvin S. D'Silva	01	24	Mr Poornesh M	16
10	Mr Prathviraj H.	09	25	Mr Rahul Kumar	29
11	Mr Rudolf . D'Souza	19	26	Mr Joel D'mello	23
12	Mr Vijay V S	15	27	Mr Alister G D'Souza	07
13	Mr Noel Deepak Shiri	44	28	Mr Akshay N H	12
14	Mr Ravikantha	12	29	Mr Canute Sherwin	14
15	Mr Sushanth H. G.	19	30	Mr Santhosh H	05

35. How to prepare your manuscript, organized by Researcher Academy, Elsevier on 10 June 2020.
36. Green Energy for Future under Webinar Series to Guide Engineering Students to Select Meaningful Projects conducted by La Fondation Dassault Systems, India on 2 July 2020.
37. "Policy Support for Material Recycling Industry to Become ATMANIRBHAR" organized by Material Recycling Association of India on 15 July 2020.
38. "Robotics-Connecting Engineering Minds" organized by McGraw Hill Education Webcasts on 29 July 2020.

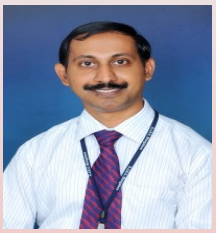
Certification Courses:

1. Dr Sudheer M has successfully completed the NPTEL Online Certification course on "Soft Skills", Jul-Oct 2019 (12 week course) with a consolidated score of 73% (Elite Grade).
2. Dr Sudheer M has successfully completed the NPTEL Online Certification course on "NBA Accreditation and Teaching-Learning in Engineering", Jan-Apr 2020 (12-week course) with a passing score of 96%.
3. Dr Shreeranga Bhat, Dr Binu K G has successfully completed the Online Certification program "IGIP International Engineering Educator Certification Program" on 12 December 2019 organized by IGI, Austria.
4. Dr Shreeranga Bhat, Dr Binu K G, Mr Vijay V S, Mr Ravikantha Prabhu, Mr Chiranth B P, Mr Pavana Kumara B, Mr Sushanth H G, Mr Yathish Kumar, Mr Vinoothan Kaliveer have successfully completed the Online Certification program "IUCEE International Engineering Educator Certification Program" during 2019 and 2020 organized by Indo-US Collaboration for Engineering Education (IUCEE), US.
5. Dr Sudheer M, Dr Shreeranga Bhat, Dr Binu K G, Mr Rolvin D'Silva, Mr Rudolf D'Souza, Mr Sharun Mendonca, Mr Ravikantha Prabhu, Mr Joel D'Mello, Mr Vinoothan Kaliveer, Mr Alsiter D'Souza have successfully completed the "Master Facilitator in Leadership and Human Resource Development (MFLHRD) on 18 January 2020 organized by Centre for Leadership and Human Resource Development, Mangaluru.
6. Dr Shreeranga Bhat, Dr Binu K G has successfully completed one year Online Certification Course on "Engineering Education Research" on 30 June 2020 organized by Indo-US Collaboration for Engineering Education (IUCEE), US.
7. Dr Binu K. G. has successfully completed a certified Course on "Intelligent Machining" offered by Coursera during April 2020.
8. Dr Binu K. G. has successfully completed a certified course on "Programing for Everybody (Getting Started with Python)" offered by Coursera during April 2020.
9. Mr Rolvin D Silva has successfully completed an online non-credit course Coursera on "Programming for Everybody (Getting Started with Python)" from University of Michigan on 7 July 2020.
10. Mr Rolvin D Silva has successfully completed a self- paced training course "Matlab Onramp" on 10 July 2020.
11. Mr Rudolf D'Souza has successfully completed a course "Teaching and Learning Engineering" with a consolidated score of 61% conducted by NPTEL from July-Aug 2019.
12. Mr Vijay V. S. has successfully completed "Solid Waste Management in Developing Countries" an online non-credit course (6 weeks) authorized by École Polytechnique Fédérale de Lausanne offered through Coursera on 19 Oct 2019 with a pass percentage of 82.53%.
13. Mr Vijay V. S. has successfully completed and received a passing grade (80%) in SWM2001x: Solid Waste Management, a online course of study (6 weeks) offered by WBGx, an online learning initiative of World Bank. through edX on 08 July 2020.
14. Mr Vijay V. S. has successfully completed "MATLAB Onramp and Teaching MATLAB", online courses (2 hour each) on 25/07/2020 and 28/07/2020 respectively by Mathworks Training Services.
15. Mr Chiranth B.P has successfully completed the NPTEL Online Certification course on "Academic writing", Jul-Oct 2019 (15-week course) with a consolidated score of 89%.
16. Mr Chiranth B.P has successfully completed the Self learning Online course on "Understanding open educational resources", Oct 2019 (one day) offered by the Commonwealth of Learning, Canada.
17. Mr Sharun Mendonca has successfully completed a certificate course on "10 Reasons to Get and Use an Orcid ID" by Researcher Academy, Elsevier in April 2020.
18. Mr Sharun Mendonca has successfully completed a certificate course on "10 tips for writing a truly terrible journal article" by Researcher Academy, Elsevier in April 2020
19. Mr Sharun Mendonca has successfully completed a certificate course on "How to conduct evidence-based research" by Researcher Academy, Elsevier in April 2020
20. Mr Sharun Mendonca, Mr Chiranth B P have successfully completed a certificate course on "Creating a good research data management plan" by Researcher Academy, Elsevier in April 2020
21. Mr Sharun Mendonca has successfully completed a certificate course on "What to expect from the Certified Peer Reviewer Course?" by Researcher Academy, Elsevier in April 2020
22. Mr Sharun Mendonca has successfully completed a certificate course on "Finding the right journal" by Researcher Academy, Elsevier in April 2020
23. Mr Sharun Mendonca, Mr Chiranth B P have successfully completed a certificate course on "Funding Hacks for Researchers" by Researcher Academy, Elsevier in April 2020
24. Mr Sharun Mendonca has successfully completed a certificate course on "How to get your book published" by Researcher Academy, Elsevier in April 2020.
25. Mr Sharun Mendonca has successfully completed a certificate course on "How to identify the right journal to publish in" by Researcher Academy, Elsevier in April 2020.
26. Mr Sharun Mendonca, Mr Chiranth B P have successfully completed a certificate course on "How to manage and publish your research data" by Researcher Academy, Elsevier in April and June 2020.
27. Mr Sharun Mendonca has successfully completed a certificate course on "Research data management" by Researcher Academy, Elsevier in April 2020.
28. Mr Sharun Mendonca, Mr Chiranth B P have successfully completed a certificate course on "How researchers store, share and use data" by Researcher Academy, Elsevier in April and May 2020.

29. Mr Sharun Mendonca has successfully completed a certificate course on “How to secure funding - ECR edition” by Researcher Academy, Elsevier in April 2020
30. Mr Sharun Mendonca has successfully completed a certificate course on “How to turn your thesis into an article” by Researcher Academy, Elsevier in April 2020
31. Mr Poornesh M. has successfully completed an Online Course on “Materials Science: 10 Things every Engineer should know” by Coursera on 20 May 2020.
32. Mr Poornesh M. has successfully completed an Online Course on “Six Sigma Tools for Analyze” by Coursera on 30 May 2020.
33. Mr Poornesh M. has successfully completed an Online Course on “Six Sigma Principles” by Coursera on 15 June 2020.
34. Mr Poornesh M. has successfully completed an Online Course on “Intelligent Machining” by Coursera on 17 June 2020.
35. Mr Poornesh M. has successfully completed an Online Course on “Six Sigma Tools for Define and Measure” by Coursera on 11 July 2020.
36. Mr Poornesh M. has successfully completed an Online Course on “Programming for Everybody (Getting Started with Python)” by Coursera on 6th June 2020.
37. Mr Alister D’Souza has completed a course on “Teaching with MATLAB” offered by MathWorks on 28 July 2020.
38. Mr Alister D’Souza has completed a course on “MATLAB Onramp” offered by MathWorks on 28 July 2020.
39. Mr Alister D’Souza has completed an online course on “How to Teach Online Effectively” offered by Great Learning in the month of July 2020.
40. Mr Alister D’Souza has completed an online course on “Advanced Manufacturing Enterprise” authorized by University at Buffalo and The State University of New York and offered through Coursera on 03 July 2020.
41. Mr Alister D’Souza has completed an online course on “Autodesk Fusion 360 Integrated CAD/CAM/CAE” authorized by Autodesk and offered through Coursera on 30 April 2020.
42. Mr Alister D’Souza has completed an online course on “Intro to Digital Manufacturing with Autodesk Fusion 360” conducted by Autodesk offered through Coursera on 23 April 2020.
43. Mr Canute Sherwin has successfully completed an online course “Defeat Covid-19 Be a Champion” organized by Gulf Medical University on 30 March 2020.
44. Mr Canute Sherwin has successfully completed a course “Discoverability top tips to get your book out there” by Researcher Academy (Elsevier) on 4 June 2020.
45. Mr Canute Sherwin has successfully completed a course “Successful research grant application- getting it right” by Researcher Academy (Elsevier) on 28 April 2020.
46. Mr Canute Sherwin has successfully completed a course “Writing a persuasive cover letter for your manuscript” by Researcher Academy (Elsevier) on 3 June 2020.
47. Mr Canute Sherwin has successfully completed a course “Product Design Using Value Engineering” with a consolidated score of 92% conducted by NPTEL from July-Aug 2019.
48. Mr Akshay N H has successfully completed NPTEL Online certification course on “Design thinking-A Primer” with a consolidated score of 73 % from Feb- March 2020.
49. Mr Akshay N H has completed a Udemy Course titled “Design thinking for beginners: Develop innovative ideas” on 3 June 2020.
50. Akshay N H has successfully completed an online course “Defeat Covid-19 Be a Champion” organized by Gulf Medical University on 16 May 2020.

Faculty Achievements:

1. Ten faculty members have undergone Facilitator Certification Programme in Human Resource Development by College for Leadership and Huma Resource Development (CLHRD), Mangaluru and were presented with “Facilitator Award” on 18 January 2020.

				
Dr Sudheer M	Dr Shreeranga Bhat	Dr Binu K G	Mr Rolvin D’Silva	Mr Rudolf D’Souza
				
Mr Sharun Mendonca	Mr Vinoothan Kaliveer	Mr Ravikantha Prabhu	Mr Joel D’Mello	Mr Alister D’Souza

2. Nine faculty members have completed International Engineering Educators Certification Program (IEECP) from Indo-Universal Collaboration for Engineering Education (IUCEE) during 2019 and 2020.

				
Dr Shreeranga Bhat	Dr Binu K G	Mr Vijay V S	Mr Ravikantha Prabhu	Mr Vinoothan Kaliveer
				
Mr Chiranth B P	Mr Pavana Kumara	Mr Sushanth H G	Mr Yathish Kumar	

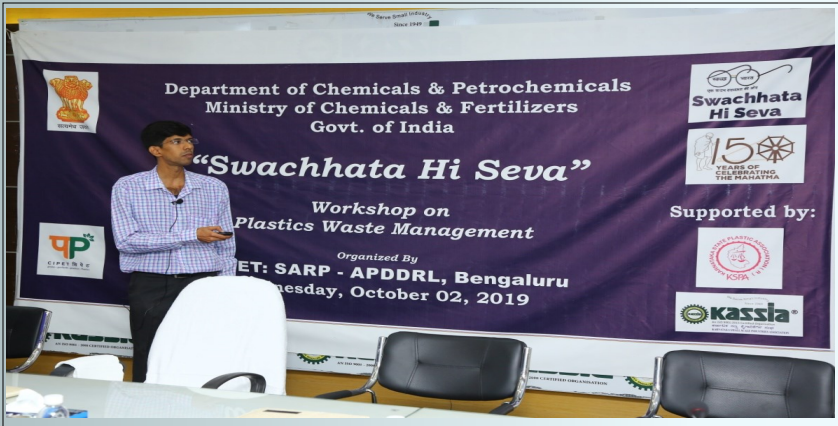
3. **Dr Raju K.** has received Rs. 10,00,000/- VGST-KFIST-L1 grant (II Installment) during May 2020.

Dr Raju K

4. Best Paper Award - "Effective Deployment of Outcome Based Education: Strategies based on Motivational Models", Authored by **Shreeranga Bhat,** Rio D'Souza, Sathyendra Bhat, Ragesh Raju, **Pavana Kumara B**, in the 7th International Conference on 'Transformations in Engineering Education (ICTIEE 2020)' powered by Indo-Universal Collaboration on Engineering Education (IUCEE) held on 6-8 Jan 2020 at Anurag Group of Institutions, Hyderabad.

5. Best Paper Award - "Application of Robust Engineering Approach for DC Motor Controller Design", Authored by Vinayambika S Bhat, **Shreeranga Bhat,** Gijo E V, in the Global Conference on 'Advanced Smart and Sustainable Technologies in Engineer-

6. Mr Noel Deepak Shiri was invited to display the recycling and upcycling project on "Development of Waste Plastic Lumber & Bricks using Commingled (Mixed) Waste Plastics and Single use Waste Plastics", IPLEX 2019 (10th Edition of International Plastics Exposition 2019) held in Bengaluru International Exhibition Center (BIEC), Bengaluru from 23-25 August 2019.



7. Mr Noel Deepak Shiri was invited to give guest talk on the topic "Development of Waste Plastic Lumber and Bricks using Commingled (Mixed) Waste Plastics and Single Use Waste Plastics" in the workshop on "Plastic Waste Management" organized by CIPET and KASSIA, Bengaluru in KASSIA Auditorium, KASSIA Udyog Bhavan, Bengaluru on 02 Oct 2019.

8. Mr Noel Deepak Shiri was invited to attend and exhibit the Waste Plastic Upcycling Project on the "Swachhata He Seva" Workshop and Exhibition on "Plastic Waste Management" Organized by CIPET : SARP-APDDRL, Bengaluru held at KASSIA Auditorium, Bengaluru on 02 Oct 2019.

9. Mr Noel Deepak Shiri was invited to display the recycling and upcycling project on "Development of Waste Plastic Lumber & Bricks using Commingled (Mixed) Waste Plastics and Single use Waste Plastics", in the International 11th Edition of PLASTIVISION INDIA 2020 Exposition held in Bombay Exhibition Center, NESCO Grounds, Goregao, Mumbai from 16-20 January 2020.

90% of the jobs that exist today will get modified drastically or not exist in the next decade

Faculty Patents:

Sl. No.	Staff Name	Title	Patent Number	Patent Publisher	Status
1	Dr. Purushothama Chippar	Aircraft Prognostic Systems and Methods for Determining Adaptive Time Between Overhaul, For Line Replaceable Units	US9568912B2	US patent office journal	Granted on 14th February 2017
2	Mr. Prathiviraj H	Automated Domestic Gas Stove with Manual and Servo Valve Controlled Independently Flooded Concentric Gas Burner	6051/CHE/2013	Official Journal of the Indian Patent Office	First examination report is received
3	Mr. Prathiviraj H	Mutually Opposite and Coaxially Rotating Armature and Field Coils Type Electric Generator	201741044759	Official Journal of the Indian Patent Office	Request for examination under process as on date
4	Mr. Vijay V S	Efficient Two Stroke Engine	3152/CHE/2014A	Official Journal of the Indian Patent Office	First examination report is received

Funded Projects:

Sl.No	Agency	Grant (Rs)	Title	Principal Investigator
1	VGST, Govt of Karnataka (2014-16)	20,00,000 (Ongoing)	Effect of alloying elements and process variables on the properties of Al-Si alloys produced by Spray Forming	Dr Raju K (Professor)
2	VGST, Govt of Karnataka (2015-17)	20,00,000 (Completed)	Experimental and Numerical Analysis for the development of Metal Hydride based Hydrogen Storage System	Dr Purushothama Chippar (Professor)
3	IPR, Gujarath (2016-18)	13,50,000 (Completed)	Design, Development and Optimization of Metal Hydride Beds for Hydrogen Isotope Storage and Transportation	Dr Purushothama Chippar (Professor)
4	TAICT, Bengaluru	5,64,874 (Completed)	Waste plastic processing Machines - Extruder-Injection Moulding Machine and Shredder machine	Mr. Noel Deepak Shiri (Asst. Professor)
5	TAICT, Bengaluru	43,390 (Completed)	A Study of Mechanical Properties of Lumber Developed from Waste Plastic	Mr. Noel Deepak Shiri (Asst. Professor)
6	SJEC- Seed Money for Research 2017-18	1,23,000 (Completed)	Performance analysis of CI engine using biodiesel based nanofuels	Dr Binu K G Mr Rolvin D'Silva
		1,37,400 (Completed)	Performance analysis of journal bearing operating on magnetorheogical (MRF) and nanofluids as lubricants	Dr Binu K G Mr Yatish Kumar
7	SJEC- Seed Money for Research 2018-19	2,20,000 (Completed)	Title: Study on the thermal behavior of distilled water along with influence of nano-fluid in a shell and tube heat exchanger	Mr Sushanth H G Mr Joel D'Mello
8	SJEC – Seed Money for Research 2019-20	2,20,000 (Completed)	Title: Hardness and impact properties of filler modified fiber reinforced polymer composites	Dr Sudheer M Mr Pavana Kumara B

Faculty/Staff Blogs on Curriculum:

COMPTER AIDED ENGINERING DRAWING By Christopher Cutinha, Log on to ... http://chris-caed.blogspot.in or Scan Code	
THERMAL ENGINEERING By Sushanth, Rolvin, Ramya and Sharun Log on to ... http://sushanthhgnotes.blogspot.in or Scan Code	
MATERIAL SCIENCE By Chiranth and Orville Log on to ... http://msmsjec.blogspot.in or Scan Code	
KINEMATICS OF MACHINES By Pavana Kumara B Log on to ... http://pkbkom.blogspot.in or Scan Code	
CAED - VIDEO TUTORIALS ON YOUTUBE By Christopher Cutinha Scan the QR Code to access the site	

Interaction with the outside world:

1. Dr Sudheer M is nominated as member of Board of Examiners (BoE) for Mechanical Engineering board by VTU Belagavi for the year 2019-20.
2. Dr Shreeranga Bhat and Dr Binu K G delivered a webinar on "OBE Deployment and Sustainment to Develop Epistemic Curiosity among the Students: Application of Deming's Model", during IUCEE Webinar Series with St. Joseph Engineering College, on 21 October 2019, organized by Indo-Universal Collaboration on Engineering Education (IUCEE), USA.
3. Dr Shreeranga Bhat delivered Lecture on "Design of Experiments" during five-day FDP on 'Research Tools and Techniques', held on 27 January 2020, organized by Department of Mechanical Engineering at Yenepoya Institute of Technology (YIT), Mangaluru,.
4. Dr Shreeranga Bhat chaired a session during the International Conference on Emerging Trends in Science and Engineering (ICETSE-2020) held online on 10th and 11th of July 2020, at SMVITM, Udupi, Karnataka.
5. Dr Jayavardhana M. L. is nominated as Active Alumni Member of Department Advisory Committee (DAC) in Department of Mechanical Engineering VCET ,Puttur.
6. Mr Rudolf D'Souza and Mr Sharun Mendonca have delivered a talk on "Refrigeration and Air Conditioning and Welding" conducted at RUSEMP, Pakshikere on 9 September 2019.
7. Mr Vijay V. S. has held the position of Assistant Faculty for the Student Leadership Course organized by IUCEE EWB, from March -2020 to May 2020.
8. Mr Sushanth G was invited to Judge the Robowars Event in "Sridevi Sambhram 20: A National Level Technical and Cultural Fest" on 12-13 March 2020 held at SDIT, Kenjar
9. Mr Ashwin Shetty is Member of the group for construction of a Suspension Bridge in Mallur Gram Panchayat since 2019.
10. Mr Ashwin Shetty is Group member of Green Tech team for Care Pachanadi waste management project since August 2020.
11. Mr Poornesh M organized Children's Day Celebration in association with the Cultural Committee at St.Michael's Aided Higher Primary School, Belluru, Bantwal on 14 November 2019.
12. Mr Alister D'Souza has assisted in the Conduction of 'FEEL Employable' Learning and Development Intervention at SIT, Tumkur, from 30 January to 01 February 2020.

A startup by the Department Faculty:

Cognate Industrial Automation was established in 2018 with the endeavour to provide prompt and quality products and services to private, public and Govt. sector industries.

VISION

To be referred as the most favourable company and to deliver customer satisfaction with innovation and creativity

MISSION

To flourish together with customers and employees, and to contribute to a prosperous society

Dr Purushothama Chippar

Major clients

MCF Mangalore Chemicals & Fertilizers Limited · ONGC MRPL · KMF Nandini · Gurucharan Industries · Massilly India Packaging · Marathon Heater · Prestige Group · Reliable Cashew · emi Eswari Global Metal Industries Pvt Ltd · The Manipal Group · Cardolite Chemistry for Tomorrow · Precot Meridian · Modern Kitchens · Konspec · Solara Active Pharma Sciences · Ruchi Soya Industries Ltd. · St. George's Homoeopathy · Hatch to Health · UB Group United Spirits · SPM · Gadré · adani wilmar · Campco · Primacy Delivering Brilliance · Achal Cashew.com · aruna · Tata Coffee Limited

Cognate Industrial Automation, Auto World Towers, Kottara, Mangalore, Karnataka 575006.
+91 8244113663 9986633663 9448071061, cognateia@gmail.com

The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency. The second is that automation applied to an inefficient operation will magnify the inefficiency.

(Bill Gates)

Membership in Professional Bodies:

Name of the Professional Body	No of Faculty Members
Indian Society for Technical Education (ISTE)	I8
Institution of Engineers (India)	07
International Association of Engineers (IAENG)	04
Tribology Society of India (TSI)	01
Society of Automotive Engineers (SAE) INDIA	01
Imperial Society for Innovative Engineers (ISIE) INDIA	01
Indian Society for Advancement of Materials and Processing Engineering (ISAMPE)	01

* Dr Shreeranga Bhat was nominated as Editorial Advisory Board Member of International Journal of Lean Six Sigma :Scopus Indexed and WoS Indexed Journal.
* Dr Shreeranga Bhat was nominated as Associate Editor – Journal of Engineering Education Transformation: Scopus Indexed Journal.
* Mr Sharun Mendonca has become the Member of Institute of Research Engineers and Doctors.
* Mr Sharun Mendonca is Member of Teaching and Education Research (MTERA).
* Mr Raghavendra Prasad S.A was nominated as a Life time Review committee member [IJRAR RMS] of the "International Journals of Research and analytical reviews.

Research Article Review:

1. Dr Sudheer M has reviewed 06 research articles submitted to International Conference 'ETIME 2019' held at SJEC Mangaluru during 9 & 10th August 2019.
2. Dr Raju K has reviewed the article on Fabrication technique and sliding wear behavior of aluminum alloy composites (SNAS-D-20-03926) – S N Applied Sciences (A Springer Nature Journal) during (May 2020).
3. Dr Raju K has done language editing for the article- Simran Sokhal, Sag Ram Verma, "A fourier wavelet series solution of partial differential equation through the separation of variables method", Applied Mathematics and Computation, 388 (2020) 125480. (An Elsevier publication).
4. Dr Shreeranga Bhat has reviewed 02 research articles submitted to International Conference 'ETIME 2019' held at SJEC Mangaluru during 9 & 10th August 2019.
5. Dr Shreeranga Bhat has reviewed the article "A novel approach towards first year engineering Workshop Practice course with the combination of project and product-based learning (PPBL) for improved and joyful learning" in Journal of Engineering Education Transformation, 29 September 2019.
6. Dr Shreeranga Bhat has reviewed the article "Instilling Research Attitude in Students at Mechanical Engineering School through REU Approach" in Journal of Engineering Education Transformation, 29 September 2019.
7. Dr Shreeranga Bhat has reviewed the article on "Online assignment approach in mechatronics system design course using Google classroom" in Journal of Engineering Education Transformation, 2 April 2020.
8. Dr Binu K. G. has reviewed two papers for Seventh International Conference on Transformations in Engineering Education (ICTIEE 2020) held from Jan 5 to 8, 2020 at Anurag Group of Institutions Hyderabad.
9. Dr Binu K. G. has reviewed a paper for Materials Today Proceedings. June 2020.
10. Mr Rolvin D'Silva has reviewed 02 research articles submitted to International Conference 'ETIME 2019' held at SJEC Mangaluru during 9 & 10th August 2019.
11. Mr Rolvin D'Silva has reviewed one paper for the International Journal :Acta Mechanica. (Springer Publishers) during October 2019.
12. Mr Ravikantha Prabhu has reviewed 01 research article submitted to International Conference 'ETIME 2019' held at SJEC Mangaluru during 9 & 10th August 2019.
13. Mr Sushanth H G has reviewed 02 research articles submitted to International Conference 'ETIME 2019' held at SJEC Mangaluru during 9 & 10th August 2019.
14. Mr Pavana Kumara B has reviewed 03 research articles submitted to International Conference 'ETIME 2019' held at SJEC Mangaluru during 9 & 10th August 2019

Other relevant information:

1. Dr Sudheer M was nominated as a member of Central Mentoring–Cum-Counseling Committee of SJEC for the academic year 2019-20. The committee was formed as per the requirements of VTU Belagavi.
2. Dr Sudheer M was nominated as member of Equal Opportunity Cell (EOC) for students of SJEC for the academic year 2019-20. The committee was formed as per the requirements of VTU Belagavi.
3. Dr Sudheer M has served as session chair for the International conference on Emerging Trends in Mechanical Engineering ETIME-2019 on 10th Aug 2019 held at Department of Mechanical Engineering SJEC Mangaluru.
4. Dr Sudheer M presented on topic "Research Opportunities in Polymer Composites" in the Research Conclave at SJEC held during 27 and 28 January 2020.
5. Dr Binu K. G. has delivered Sessions on Learning Styles and Epistemic Curiosity for all First Year Sections as part of the Student Induction Programme. August 2019 and Feb 2020.
6. Dr Binu K. G. has delivered a Presentation on Epistemic Curiosity in the SJEC Faculty Conclave held on 18-21 January 2020.
7. Dr Binu K. G. has presented a Research Scope in Tribology in the Research Conclave at SJEC on 27-28 January 2020.
8. Dr Binu K. G. has organized the First TEDxSJEC on 16 February 2020.
9. Dr Jayavardhana M.L has chaired a Technical Session in the International Conference on Emerging Trends in Mechanical Engineering (e-TIME 2019) on 09/08/2019 at the Department of Mechanical Engg, SJEC, Mangalore, India.
10. Mr Rolvin D'Silva has completed IIEE Certification Program Phase-2 in the month of July 2020.
11. Mr Noel Deepak Shiri organized a Seminar and Interaction on "Plastic Waste Management" by Mr. Vijaya Kumar V, CEO, Trimurti Group of Companies, Bengaluru and President of Karnataka State Plastic Association (KSPA) in association with IIC, SJEC, on 29 November 2019.
12. Noel Deepak Shiri carried out Mini Projects under CIM lab for all the students of 7th Semester in different batches in HTTI, Balmatta, Mangaluru from 13 to 20 November 2019.
13. Mr Noel Deepak Shiri participated in the SOCIAL MAVERICK CHALLENGE by TATA group and IIM Calcutta Innovation Park by submitting the article on 15 December 2019.
14. Mr Noel Deepak Shiri participated in the Government of India's Startup India Single Use Plastic International Grand Challenge on 18 October 2019.
15. Mr Noel Deepak Shiri represented SJEC and Participated in NITTE-KBL MSME Conclave & Business Excellence Awards 2019 on "Empowering MSMEs for Sustainable Development" on 7th December 2019 in Hotel Ocean Pearl, Mangaluru.
16. Mr Noel Deepak Shiri participated along with 5 students from Mechanical Department to the Interaction session and talk on "Indian Economy: Challenges & Opportunities" by Padma Bhushana Sri Tarun Das, Chairman, Institute of Economic Growth & Former Mentor & Director General, Confederation of Indian Industry (CII) on 28th February 2020 at KCCI Chamber Building, Bunder, Mangaluru.
17. Mr Noel Deepak Shiri arranged an industrial visit to Times of India (TOI) Printing Press in Kandivili, Mumbai on the 15th January 2020 along with 04 students.
18. Mr Noel Deepak Shiri was presented the Research Work Topic on "Plastics 4 Upcycling-Development Of Waste Plastic Lumber & Bricks Using Commingled (Mixed) Waste Plastics And Single Use Waste Plastics" to all the SJEC Faculty in SJEC Research Conclave 2020 on the 28 January 2020.
19. Mr Ravikantha Prabhu was convener for Three day "IUCEE International Engineering Educator Certification Program (IIEECP)" Precertification workshop held from 5th to 7th August 2019.
20. Mr Ravikantha Prabhu was organizing Committee member of TEDx SJEC held on 16th February 2020.
21. Mr Sushanth G organised a Webinar on Using Mathworks Tools in Online Teaching under MATLAB SJEC committee on July 28, 2020.
22. Mr Yathish Kumar has conducted ANVESHAN Reloaded program to select 15 best startup ideas to apply for NAIN fund and submitted the ideas in Feb 2020 to NAIN portal.
23. Mr Yathish Kumar was in Lead Design Team in TEDx SJEC 2020.
24. Mr Poornesh M had organized an inter class cultural competition Avakaash 2020 for First Year Students as a part of Induction Programme on 20 Feb 2020.
25. Mr Rahul Kumar was Faculty Coordinator for One Week NSS Camp held at Primary Government School, Puthige village, Moodabidri, Dakshina Kannada from 20-26 Jan 2020.
26. Mr Joel D'Mello has attended Virtual Exhibition of Engineering Exploration course projects - PRAYOG VASANTH 2020 organized by KLE Tech College Hubli held on 9 and 10 July 2020.

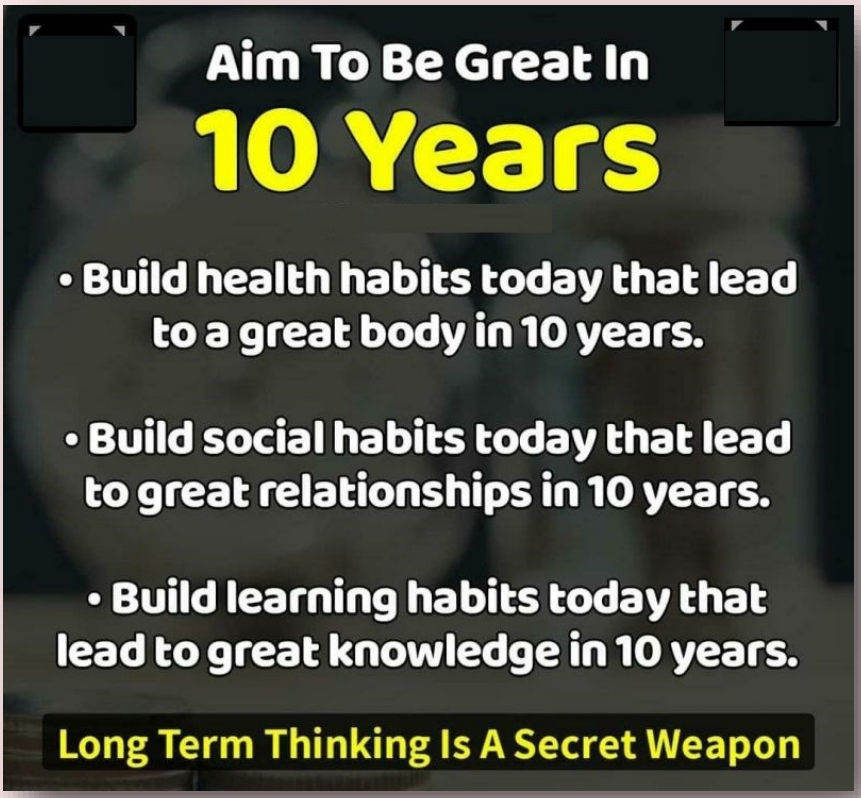
Health Tips:

* **He who has health has hope; and he who has hope has everything.**
* **It is exercise alone that supports the spirits, and keeps the mind in vigor.**
* **Happiness is the highest form of health.**

Feedback of faculty on Online Classes: Sept 2020

Sl No	Questions	Positive Responses
1	I have taken online classes during Sept 2020	100%
2	Online sessions are informative and effective to students.	95%
3	I motivate students to interact with faculty during online sessions	100%
4	My students feel connected with peers during online sessions	78%
5	I feel that my students are given ample opportunities to learn	91%
6	I could be able to effectively communicate the course contents as planned	96%
7	Instructions have been given to the students regarding the schedule of the	100%
8	I could be able to effectively communicate important deadline for self-study/ seminar etc	96%
9	I have felt effective time utilization and learning experience by the students	83%
10	I enjoyed teaching process during my online session	78%
11	I could be able to invite students for discussion and encourage their partici-	83%
12	I could be able to effectively get students attention during online classes	83%
13	Based on your experience, would you like to teach online classes/courses in	87%

*** The above responses are obtained from the Department Faculty through an online survey.**



FACULTY RESPONSIBILITIES – ACADEMIC YEAR 2019-20

Sl.No	Staff Names	Designation	Major Responsibilities at Department Level
1	Dr Sudheer M	Prof. & HOD	Head of the Department, Head of the Research, Seminar Coordinator (8th sem M1 section), Group Mentor of Composites Study Group, Organizing Chair (ETIME 2019), PAC, DAB and IQAC member.
2	Dr Raju K.	Professor	DAB, PAC member, IE(I) Coordinator, Class Advisor-VII- M3/VIII-M2.
3	Dr Shreeranga Bhat	Professor	Magazine Coordinator, Class Advisor-V-M3/ VIII-M1.
4	Dr Purushothama Chippar	Professor	Head of Clean Energy Research Group, Class Advisor -III-M2/VI-M1, Organizing Secretary ETIME 2019, Innovation Club coordinator.
5	Dr James Valder	Assoc. Professor	DAB, PAC member, NAAC Criteria Incharge, Course Coordinator, Class Advisor VII- M2, Seminar coordinator for 8th sem M2 section.
6	Dr Binu K.G.	Assoc. Professor	Faculty Coordinator - ARC-SJEC**,** Faculty Coordinator - FESTO Centre for Industrial Automation, Class Advisor-V-M2/VI-M2.
7	Dr Suma Bhat	Assoc. Professor	EGD Lab Incharge, Class Advisor- V-M1/VI-M3, Student amenities coordinator.
8	Dr Jayavardhana M. L.	Assoc. Professor	Research Coordinator, NAAC Criteria Incharge, Course Coordinator, Class Advisor- IV- M1.
9	Mr Sampath Kumar	Asst Professor	Administrative Office & Campus Planning Coordinator.
10	Mr Prashanth Kumar	Asst Professor	Discipline committee coordinator, NBA Criteria III, , Class Advisor- VII M1/VIII-M4.
11	Mr Rolvin S. D'Silva	Asst Professor	Training and Placement Coordinator, V-ACT Coordinator, Energy Lab Incharge, Heat Transfer Lab Incharge, Class Advisor-III-M3/IV M2.
12	Mr Prathviraj H.	Asst Professor	E TIME Souvenir Committee Incharge, Class Committee Incharge, FM Lab Incharge, Course Coordinator, Class Advisor-III-M1, Member of Industry and Innovation Group.
13	Mr Rudolf C. D'Souza	Asst Professor	Workshop Superintendent, Inter- Departmental Squad Team Chairperson
14	Mr Vijay V S	Asst Professor	NAAC Coordinator, Lab Incharge-MMM Lab, , Senior Faculty Advisor- SAEINDIA Collegiate Club, Development Project Coordinator.
15	Mr Noel Deepak Shiri	Asst Professor	FEA Lab, CIM lab Incharge, Library Advisory coordinator.

Sl.No	Staff Names	Designation	Major Responsibilities at Department Level
16	Mr Ravikantha Prabhu	Asst Professor	Time Table Coordinator, NBA Coordinator, Internal Exam Coordinator, PAC, DAB Member, Virtual Labs Coordinator.
17	Mr Sushanth H. G.	Asst Professor	Matlab Coordinator, EMS Coordinator, Turntin, Project Coordinator, Class Advisor-III-M4/IV- M4, Lab Incharge, Course Coordinator.
18	Mr Chiranth B. P.	Asst Professor	Lab Incharge (FFW and M/S Lab), Class Advisor- VIII -M3, Mentor, PAC and DAB member, Industry and Innovation Cell Coordinator, Department Magazine – Editor.
19	Mr Sharun Mendonca	Asst Professor	Program Coordinator (NBA), Timetable Coordinator, Internal Test Coordinator, Autonomous Coordinator, PAC, DAB Member.
20	Mr Pavana Kumara B.	Asst Professor	Member (SWAG), Internship Coordinator, Material Testing Lab Incharge.
21	Mr Swaraj D. Lewis	Asst Professor	NAAC Coordinator, E- Attestation Officer, Department Library In-charge, CAMD Lab In-charge.
22	Mr Yathish Kumar K.	Asst Professor	SAE-INDIA, ISIE-SJEC Faculty Coordinator.
23	Ms Ramya M.	Asst Professor	Jagruthi Committee Member, Internal Squad Member.
24	Mr Vinoothan Kaliveer	Asst Professor	Department Alumni Coordinator, TORQUE Coordinator, V-ACT Coordinator.
25	Mr Ashwin Shetty	Asst Professor	Department Coordinator for AICTE Activity Points Program, Class Advisor- VII-M4.
26	Mr Poornesh M	Asst Professor	Internship Coordinator, NBA First Year Program Coordinator, Class Mentor, Course Coordinator, Class Advisor.
27	Mr Rahul Kumar	Asst Professor	EMS Coordinator, Class Advisor (II sem C sec), Course Coordinator, Sports Advisory coordinator.
28	Mr Joel A D'Mello	Asst Professor	E Attestation officer, Class Advisor- V-M4/VI-M4, Design Lab Incharge, Course Coordinator.
29	Mr Alister G D'Souza	Asst Professor	EMS Coordinator, Cultural Coordinator, Sports Coordinator.
30	Mr Nitheesh D Nayak	Asst Professor	TORQUE Coordinator, Innovation Cell Coordinator, Community Engagement coordinator.
31	Mr Santhosh H	Asst Professor	Entrepreneurship Development Cell coordinator
32	Mr Akshay N H	Asst Professor	Press, Media and Social Media Coordinator
33	Mr Canute Sherwin	Asst Professor	Placement and Training, Collaborations Coordinator
34	Mr Jinu Mathew	Asst Professor	AICUF Coordinator
35	Mr Raghavendra Prasad	Asst Professor	SC/ST Cell coordinator
36	Mr Naresh Kini	Adjunct Faculty	
37	Mr Subba Rao	Adjunct Faculty	

TECHNICAL STAFFS - ACADEMIC YEAR 2019-20

Sl. No.	Name	Designation
1	Mr Rudolf D'Souza	Workshop Superintendent
2	Mr James Manoj Mascarenhas	Foreman
3	Mr Christophper Cutinho	Lab Instructor
4	Mr Janardhan Aacharya	Lab Instructor
5	Mr Harshith	Lab Instructor
6	Ms Jayashri	Lab Instructor
7	Mr Rajesh	Lab Instructor
8	Mr Rajesha	Lab Instructor
9	Mr Gunakara	Lab Instructor
10	Mr Loyal Lancy D'Souza	Lab Instructor
11	Mr Immanuel Jayakar Amanna	Lab Assistant
12	Mr Vathan Kumar	Lab Assistant
13	Mr Praveen George D'Souza	Lab Technician
14	Mr Preethesh	Lab Technician
15	Mr Pranoy Xavier D'Cunha	Lab Technician
16	Mr Bhaskar	Jr. Technician

ADMINISTRATIVE STAFFS - ACADEMIC YEAR 2019-20

Sl.	Name	Designation
1	Ms Prima D'Souza	Department Secretary
2	Mr Franklin D'Souza	Attender
3	Mr. Charles Fernandes	Attender
4	Ms Hemalatha Chowta	Helper
5	Ms Vanitha Venkatesh	Helper
6	Ms Padmavathi	Helper
7	Ms Leela	Helper

LinkedIn

Rajendra D Kulkarni • 2nd
Entrepreneur | HR & Payroll Expert | EQ Coach | Ex. Head HR at TATA Motors , Tech...
1w •

What differentiates IIT'ians from the rest
As part of my role as Campus lead at Tata Motors , got to visit every single top IIT almost for 7 years. After I interacted with several 100 of IIT students , one single theme came out very strongly, during 4 years at IIT each of them works on multiple assignments, projects , events averaging almost 15-18 hours a day. Those who can't manage this fall out early. But those who succeed through this are ready to take on every single battle with much ease due to this mental and physical conditioning.
You might have heard rule of 10,000 hours of deliberate practice to master a skill. I feel that these students are living example of this.
Even we can achieve this if we are ready to put in hardworking required to accomplish multiple tasks that come our way. So where do you want to spend your next 10,000 hours ?

Ministry of Technical and Administrative Staffs

Technical Staff Achievement and Participation

Workshops/Training Programs/FDPs attended:

1. James Manoj Mascarenhas, Harshith and Rajesha, Immanvel Jayakar have successfully completed the training program "Product Design Engineer-Mechanical "organized by KH Designs Bengaluru, organized by Department of Mechanical Engineering SJEC from 08 July 2019 to 03 August 2019.
2. James Manoj Mascarenhas has successfully completed the short term training program through ICT mode on Rural Development through Technical Institution organized by National Institute of Technical Teachers' Training and Research, Kolkata from 29 July 2019 to 02 August 2019.
3. James Manoj Mascarenhas has undergone basic training in Fire Prevention and Firefighting organized by R.A.Mundkur Fire and Emergency Services Academy Bannerghatta Road Bangalore from 13 Feb 2020 to 15 Feb 2020.
4. James Manoj Mascarenhas, Christopher Cutinha, Immanvel Jayakar and Gunakara have participated in the three-day online faculty development program on PLC programming and Industrial Interface organized in association with Indwell Automation Pune from 22 to 24 June 2020.
5. James Manoj Mascarenhas, Harshith have participated in the one-week online Faculty Development Program on Insights on Writing Research Proposals and Funding Opportunities held from 20 to 24 July,2020 organized by Research and Facilities Group SJEC.
6. James Manoj Mascarenhas, Janardhana Acharya, Immanvel Jayakar, Jayashri, Harshith and Bhaskara Kumar have participated in a three-day online TECHNO LEGAL SUMMIT on CAP (Cyber, Al and Patents) held on 03 to 05 August 2020, organized by the IQAC of SJEC and SDM Law College Mangaluru.
7. Christopher Cutinha participated in FEEL Teacher-Developing, Counselling. Mentoring Learning & development Intervention organized by SJEC, Mangalore on 18 Jan 2020.
8. Harshith, Bhaskara Kumar has successfully attended a one-week online Faculty Development Program on TECHNOLOGICAL ADVANCEMENT IN MECHANICAL ENGINEERING TAME-2020 organized by Department of Mechanical engineering of Balaji institute of Technology and Science, Laknepally, Warangal 29 June to 03 July 2020.
9. Harshith has attended six days online Faculty Development Program (FDP) on Nano material Synthesis, Process, Characterization and its Functional applications organized by Department of Automobile Engineering, Hindustan College of Engineering and Technology Coimbatore from 6 to 11 July 2020.
10. Gunakara has attended a one-week online Faculty Development Program on Recent Trends in Manufacturing organized by Department of Mechanical Engineering (Mechatronics) Mahatma Gandhi Institute of Technology Telangana during 28 July to 01 August 2020.
11. Bhaskara Kumar has participated in one-day virtual workshop on Additive Manufacturing organized by Department of Mechanical Engineering Mandsaur University in association with Mcube 3D printing Pvt Ltd on 25 July 2020.

Online Certification Courses:

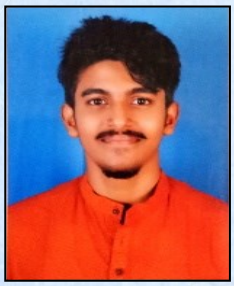
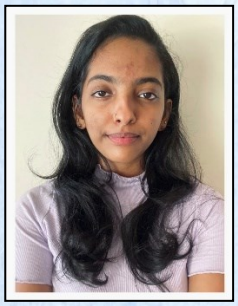
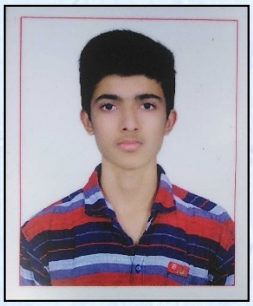
1. James Manoj Mascarenhas has successfully completed the NPTEL Online Certification course on "Product Design using Value Engineering ", Jul-Aug 2019 (04 week course) with a consolidated score of 61% (Elite Grade).
2. Gunakara has successfully completed the NPTEL Online Certification course on "Product Design using Value Engineering", Jul -Aug 2019 (04 week course) with a consolidated score of 56%.
3. Rajesha Acharya has successfully completed the NPTEL Online Certification course on "Inspection and Quality Control in Manufacturing", Feb-Mar 2020 (04 week course) with a consolidated score of 57%.
4. James Manoj Mascarenhas has successfully completed an online non-credit course on Moral Foundations of Politics authorized by Yale university and offered through Coursera on 24 Sept 2020.

Table: Number of webinars attended by the technical staffs 2019-20

Name	No of webinars attended	Name	No of webinars attended
Mr James M Mascarenhas	27	Mr Gunakara	06
Mr Christopher Cutinha	06	Mr Immanuel J Amanna	13
Mr Janardhan Acharya	08	Mr Vathan Kumar	19
Mr Harshith	21	Mr Preethesh	06
Ms Jayashri	08	Mr Pranoy X. D'Cunha	02
Mr Rajesh	04	Mr Praveen G. D'Souza	05
Mr Rajesha A	02	Mr Bhaskara	07

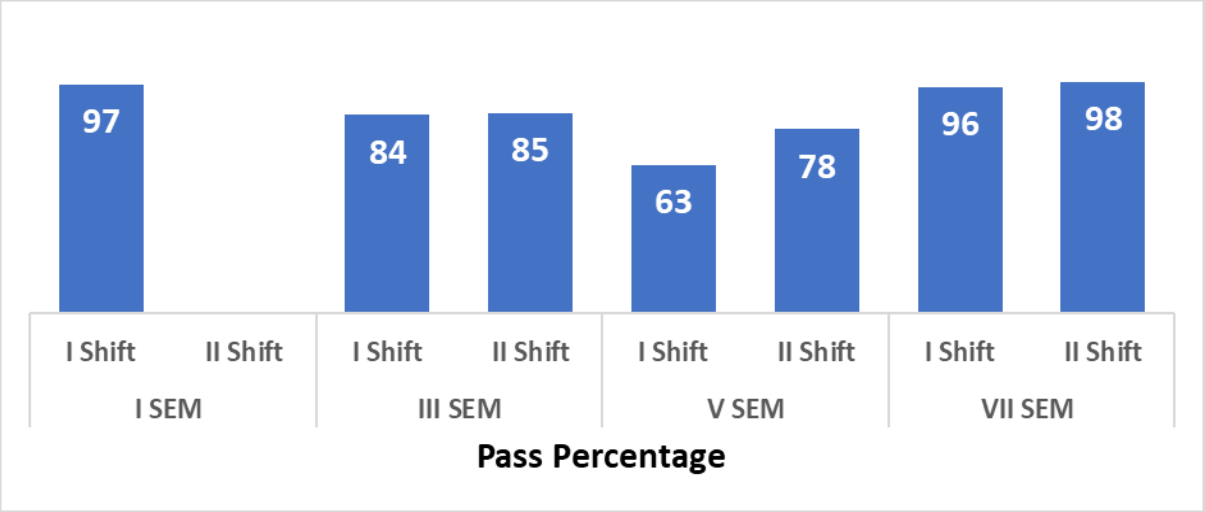
Student Achievements

CLASS TOPPERS – ACADEMIC YEAR 2018-19

BE – IV Year				
	ALTAMASH SHEIKH	LESTER MENEZES	PRATHEEK A	DEEKSHITH POOJARY
BE – III Year				
	SANJAY MOHUNTA	DEEPAK SHETTY K	HARSHA KIRAN M SHETTY	SWAROOP SHETTY
BE – II Year				
	VARUN M	SHASHANKA SUBRAMANYA	ANUP K	MAHAMMAD SINAN A S
BE – I Year				
	ANUSHKA RAO	ATUL T	NISCHAL NAIK	Congratulations

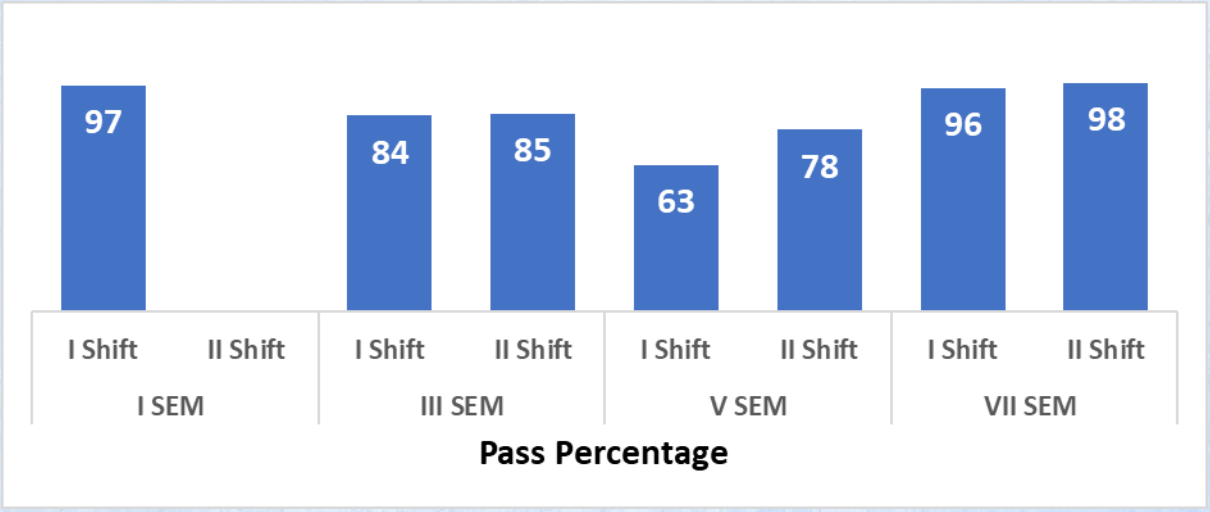
EVEN SEM (2018-19) AND ODD SEM (2019-20)- UNIVERSITY EXAMINATION RESULTS

Semester	Regular shift		Second Shift		Total	
	Appeared in exam	Passed in exam	Appeared in exam	Passed in exam	Appeared in exam	Passed in exam
II	89	76	45	41	134	117
IV	140	77	42	33	182	110
VI	129	87	44	30	173	117
VIII	125	125	52	52	177	177



DECEMBER 2019- JANUARY 2020 (ODD SEM)

Semester	Regular shift		Second Shift		Total	
	Appeared in exam	Passed in exam	Appeared in exam	Passed in exam	Appeared in exam	Passed in exam
II	109	106	-	-	109	106
IV	105	88	48	41	153	129
VI	136	85	42	33	178	118
VIII	129	124	41	40	170	164



STUDENTS ACHIEVEMENTS: Technical Events 2019-20

1. Mr Prem Sagar Thumbe has secured Second Place in Bridge Making held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12 and 13 March 2020.
2. Mr Alwyn Gonsalves has secured First Place in ATV Bots organized by MIT, Manipal from 9 to 12 October 2019.
3. Mr Alwyn Gonsalves has secured First Place in Robowars 45 kg organized by MIT, Manipal from 9 to 12 October 2019.
4. Mr Alwyn Gonsalves has secured First Place in Light of Seven organized by NITK, Surathkal from 18 to 20 October 2019.
5. Mr Koushik K has secured First Place in Robowars organized by NITK, Surathkal from 18 to 20 October 2019.
6. Mr Koushik K has secured First Place in Water Rocket organized by NITK, Surathkal on 20 and 21 September 2019.
7. Mr Preetham Vianny Correa has been recognized as 'Young Innovator' by winning Second Prize in "National Level Ideathon 2020" organized by Institution's Innovation Council (MHRD Innovation Cell, Government of India) of Yenepoya Institute of Technology, Moodbidri on 27 July 2020.
8. Mr Rahul P Ullal has successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 90% organized by PES Institute of Technology and Management, Shivamogga on 12 and 13 June 2020.
9. Mr Reon Rodrigues has successfully completed a technical e-quiz on "Elements of Mechanical Engineering" with a score of 72% organized by Canara Engineering College, Mangaluru during June 2020.
10. Mr Reon Rodrigues, Mr Rohan Dominic D'souza, Mr Rolson Benoy Monteiro have successfully completed a technical e-quiz on "Strength of Materials" organized by Mangalore Institute of Technology & Engineering, Moodbidri from 22 to 26 June 2020.
11. Mr Reon Rodrigues, Mr Rolson Benoy Monteiro have successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 85% organized by Rathinam Technical Campus on 12 and 13 June 2020.
12. Mr Rohan Dominic D'souza has successfully completed a technical e-quiz on "Design of Machine Elements" organized by Maharaja Institute of Technology, Mysuru on 3 July 2020.
13. Mr Rohan Dominic D'souza has successfully completed a technical e-quiz on "Design of Machine Elements" with a score of 100% organized by PES Institute of Technology and Management, Shivamogga on 16th June 2020.
14. Mr Rolson Benoy Monteiro has successfully completed a technical e-quiz on "Elements of Mechanical Engineering" with a score of 96% organized by Canara Engineering College, Mangaluru in June 2020.
15. Mr Shibin Raj T K has successfully completed a technical e-quiz on Elements of Mechanical Engineering with a score of 76% organized by Canara Engineering College, Mangaluru in June 2020.
16. Mr Suhan S Bangera has successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 100% organized by Rathinam Technical Campus on 12 and 13 June 2020.
17. Mr Varun M of has successfully completed a technical e-quiz on "Strength of Materials" organized by Mangalore Institute of Technology & Engineering, Moodbidri from 22 to 26 June2020.
18. Mr Darshith Mohan Sapalya has successfully completed a technical e-quiz on "Thermal Engineering" organized by SVNIET, Barabanki on 9 June 2020.
19. Mr Darshith Mohan Sapalya has successfully completed a technical e-quiz on "Manufacturing Science" organized by SVNIET, Barabanki on 8th June 2020.
20. Mr Darshith Mohan Sapalya of Department of Mechanical Engineering has successfully completed a technical e-quiz on "Fluid Mechanics" organized by SVNIET, Barabanki on 12th and 13th June 2020
21. Mr Varun M has successfully completed a technical e-quiz on "Elements of Mechanical Engineering" with a score of 88% organized by Canara Engineering College, Mangaluru in June 2020.
22. Mr Shibin Raj T K of Department of Mechanical Engineering has successfully completed a technical e-quiz on Fluid Mechanics with a score of 95% organized by Rathinam Technical Campus on 12th and 13th June 2020.
23. Mr Varun M has successfully completed a technical e-quiz on "Heat Transfer" with a score of 60% organized by Canara Engineering College, Mangaluru in June 2020.
24. Mr Ravish M has successfully completed a technical e-quiz on "Strength of Mateirals" organized by Mangalore Institute of Technology & Engineering, Moodbidri from 22nd to 26th June 2020.
25. Mr Ravish M has successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 90% organized by Rathinam Technical Campus on 12 and 13 June 2020.
26. Mr Ravish M has successfully completed a technical e-quiz on "Design of Machine Elements" organized by Maharaja Institute of Technology, Mysuru on 7 May 2020.
27. Mr Darshith Mohan Sapalya has successfully completed a technical e-quiz on "Welding Technology" organized by SVNIET, Barabanki on 12 June 2020.
28. Mr Darshith Mohan Sapalya has successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 65% organized by Rathinam Technical Campus on 8 June 2020.
29. Mr Mahammad Sinan A S has successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 90% organized by Rathinam Technical Campus on 12 and 13 June 2020.
30. Mr Darshith Mohan Sapalya has been awarded for attending Round 1 of "National Engineering Olympiad 3.0" organized by NEO Foundation from 24 to 28 April 2020.
31. Mr Rahul P Ullal has successfully completed a technical e-quiz on "Design of Machine Elements" organized by Maharaja Institute of Technology, Mysuru on 16 June 2020.
32. Mr Rahul P Ullal has successfully completed a technical e-quiz on "Fluid Mechanics" with a score of 90% organized by Rathinam Technical Campus on 12 and 13 June 2020.
33. Mr Raison C D'souza has participated and successfully completed online quiz on "Design of Machine Elements" conducted by Department of Mechanical Engineering, PESITM, Shivamogga on 16 June 2020.
34. Mr K Vittal Kamath has successfully completed a technical e-quiz on "Elements of Mechanical Engineering" with a score of 72% organized by Canara Engineering College, Mangaluru in June 2020.

35. Ms Anushka S Rao has participated and successfully completed online quiz on "Material Science" conducted by Department of Mechanical Engineering, PESITM, Shivamogga on 13th July 2020.

STUDENTS PARTICIPATION: Technical Events 2019-20

1. Mr Satvik Karkera has participated in Shutter Up during Incredea'20 at NMAM Institute of Technology, Nitte on 15 February 2020.
2. Mr Harsha M Bangera, Mr Anirudh Shetty have participated in Mission Impossible during Incredea'20 at NMAM Institute of Technology, Nitte on 17 February 2020.
3. Mr Harsha M Bangera, Mr Anirudh Shetty have participated in Robo Race during Incredea'20 at NMAM Institute of Technology, Nitte on 14 February 2020.
4. Mr Prajwal Shetty, Mr Harish Rao have participated in One Reel held during Aakriti-2020, an Inter Collegiate Techno-Cultural Fest organized by Canara Engineering College, Benjanapadavu during 27 to 29 February 2020.
5. Mr Alwyn Gonsalves has participated in Robo Soccer held during the National Level Techno- Cultural Fest Envision 2020 at SIT Mangaluru on 4 and 5 March 2020.
6. Mr Varun Kumar, Mr Koushik K, Mr Alstan Lewis, Mr Chirag Rai have participated in Water Rocket held during the National Level Techno- Cultural Fest Envision 2020 at SIT Mangaluru on 4 and 5 March 2020.
7. Mr Prem Sagar Thumbe has participated in E-Poster held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12 and 13 March 2020.
8. Mr Prem Sagar Thumbe has participated in Frame the Bridge held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12 and 13 March 2020.
9. Mr Olsten D'Souza has participated in Stump by Dump held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12 and 13 March 2020.
10. Mr Sushan Bhandary has participated in Bridge Designing held during a State level Inter Collegiate Techno-Cultural Fest Aakar -2020 organized by A J Institute of Technology, Mangaluru on 6 and 7 March 2020.
11. Mr Ryan Mario Fernandes has participated in "Drone Race" organized by Sahyadri College of Engineering & Management on 20 and 21 September 2019.
12. Mr Preetham Vianny Correa has participated in final round of "National Level Ideathon 2020" organized by Institution's Innovation Council (MHRD Innovation Cell, Government of India) of Yenepoya Institute of Technology, Moodbidri on 27 July 2020.
13. Mr Abhay Manoharan and Mr Deepak V have participated in a three day online "Techno Legal Summit on CAP (Cyber, AI and Patents)" 3-6 Aug 2020 jointly organized by IQAC, SJEC Mangaluru and SDM Law College Mangaluru.
14. Mr Ravish M, Mr Akshay Kumar, Mr Raison Christopher D'Souza, Mr Shamanth K S, Mr Mohd Hisham, Mr Mohd Hafraz, Mr Kawshik Shetty, Mr Anup K, Mr Harshith Krishna, Mr Karthik M Anchan, have participated in "Workshops on Start-Ups" organized by Manel Srinivas Nayak Memorial Besant Institute of Postgraduate on 19th February 2020.
15. Mr Athul Shetty, Mr Prajwal, Mr Sanil D'costa, Vaibhav Salian have participated in "Feel Communicative English" organized by St Joseph Engineering College, Mangaluru from 29th July to 3rd August 2019.
16. Mr Nischal Kumar, Mr Neeraj Shetty, Mr Desmond D'souza, have participated in "2 Days Mega Workshop" organized by Hindustan Institute of Technology and Science, Chennai on 21st and 22nd September 2019.
17. Mr Ryan Mario Fernandes and Mr Raison C D'souza have participated in "eTIME-2019, International Conference " organized by St Joseph Engineering College, Mangaluru on 9th and 10th August 2019.
18. Mr Asheeq Khalid, Mr Gilchrist Lewis, Mr Jonathan Ian Dsa, Mr Achyuth Diwakar Tonpe, Mr Vishwas, Mr Shashank Subramanya, Mr Pratheek, Mr Gautham Nayak, Mr Mohammad Aqeel, Mr Ashin Joe Simon, Mr Anup K, Mr K Varun Krishna Shenoy, Mr Harshith Krishna, Mr Basavaraja R, Mr Akash Sasikumar, Mr Harshath M Kulal, Mr Jaison G D'Cunha, Mr Karthik M Anchan, Mr Akhil Sebastian, Mr Mohamad Sahil and Mr Vishal Monteiro, Jaison B. Pinto of have participated in "The VTU Consortium Training Programme on E-Resources for Academic Excellence " organized by St Joseph Engineering College, Mangaluru on 20th September 2019.
19. Mr Kartik Sudhakar Kotian, Mr Denzil D'silva, Mr K Sachin, Mr Raghav Bhattarai, Mr Preetham Anthony D'Almeida, Mr Vignesh A Hegde, Mr Sanjay Mohunta, Mr Darren Ben D'souza, Mr Ajeyakrishna Karanth, Mr S Nagabhushan Shet, Mr Rakshith G, Mr Preetham Vianny Correa, Mr Roydon D'souza, Mr Vikas V R and Mr Sukumara have undergone a training program on "Product Design Engineer: Mechanical" by KH Designs Bengaluru organized at SJEC Mangaluru from 8 July to 3 Aug 2019.
20. Mr Ashwin Quadras has undergone a 2.5 hours course on "Fusion 360 Tutorial for CNC Machinists" through Udemy E-Learning on 29th March 2020.
21. Mr Mahammad Sinan A S g has participated in a one week skill development program on "Welding Techniques for Technical Staff & Budding Engineers", organized by MLR Institute of Technology on 22nd to 26th June 2020.
22. Mr Cletus Angleo D'souza have participated in a two days Techo Workshop Series on "Data Science" organized by NITK Surathkal on 29th February and 1st March 2020.
23. Mr Deepak V, Mr Merwin Joy Crasta and Mr Nishcalkumar Naik have undergone a self-paced training course on "MATLAB Onramp " through MathWorks Training Services on 17th May 2020.
24. Mr Abhay Manoharan, Mr Akhilesh K S, Mr Athul T, Mr Mahammad Sinan A S, Mr Merwin Joy Crasta, Mr Rolson Benoy Monteiro, Mr Shibin Raj T K and Mr Reon Rodrigues, have participated in a "Virtual Alumni Meet – Coffee and Conversation" organized by St Joseph Engineering College, Mangaluru on 25th July 2020.

25. Mr Sanil D'costa has undergone "Individual Effectiveness Labs and Organizational Effectiveness Labs" conducted by I-Point by St Joseph Engineering College, Mangaluru during 2018-19 & 2019-20.
26. Mr Suhal S Bangera , Mr Suhan S Bangera, Mr Darshith Mohan Sapalya have successfully completed 5 Days online Training Program on "Future Scope Engineering in Global Development" organized by Velalar College of Engineering & Technology, Tamilnadu from 27th to 31st July 2020.
27. Mr Vaibhav Salian has attended a workshop on "Civil Services: Plan-Prepare-Perform", organized by St Joseph Engineering College, Mangaluru on 15th February 2020.
28. Mr Varun M has attended a workshop on "Computational Fluid Dynamics", organized by Skill Lync on 2nd June 2020.
29. Mr Mahammad Sinan A S has participated in a 4-day International Conclave organized by Blackbuck Engineers Pvt Ltd from 1st to 4th July 2020.
30. Mr Mahammad Sinan A S has been awarded with certificate of appreciation for being as a volunteer during First Pilikula International Full-Dome Film Festival and Planetarium Conference from 6 to 8 November 2019.
31. Ms Anushka S Rao has undergone a self-paced training course on "MATLAB Onramp" through MathWorks Training Services on 18 March 2020.
32. Ms Anushka S Rao has undergone a self-paced training course on "Introduction to Statistical Methods with MATLAB" through MathWorks Training Services on 27 March 2020.
33. Ms Anushka S Rao has undergone a self-paced training course on "Introduction to Linear Algebra with MATLAB" through MathWorks Training Services on 18 March 2020.
34. Ms Anushka S Rao has undergone a self-paced training course on "Introduction to Symbolic Math with MATLAB" through MathWorks Training Services on 18 March 2020.
35. Ms Anushka S Rao has successfully completed self-paced training course on "Solving Ordinary Differential Equations with MATLAB" through MathWorks Training Services on 19 March 2020.
36. Mr Athul T and Mr Ryan Mario Fernandes, has undergone a self-paced training course on "MATLAB Onramp" through MathWorks Training Services on 5 June 2020

STUDENTS ACHIEVEMENT: Online Certification Courses 2019-20

1. Mr Akhtar Ahsan Sayeed has completed Coursera online certification course "AI for Everyone" on 3rd May 2020.
2. Mr Akhtar Ahsan Sayeed has undergone a 6-week online course on "Core Engineering-Solidworks" through Internshala Training from 3rd May- 14th June 2020.
3. Mr Akhtar Ahsan Sayeed has undergone a certification exam on "The fundamentals of Digital Marketing" through Google Digital E-Learning on 6th May 2020.
4. Mr Akhtar Ahsan Sayeed has undergone a 4-week online course on "Material Science- 10 Things every Engineer Should Know" through Coursera E-Learning on 6th May 2020.
5. Mr Akhtar Ahsan Sayeed has undergone a Coursera Guided Project on "Build a simple App in Android Studio Using Java" on 21st May 2020.
6. Mr Akhtar Ahsan Sayeed has undergone a course on "Content Marketing" through HubSpot Academy on 6th May 2020.


Mr Akhtar Ahsan Sayeed

7. Ms Anushka S Rao has completed Coursera online certification course "Python Data Structures" on 25th April 2020.
8. Ms Anushka S Rao has completed Coursera online certification course "Programming for Everybody (Getting Started with Python)" on 21st April 2020.
9. Ms Anushka S Rao has completed Coursera online certification course "How to write a Resume (Project-Centered Course)" on 16th May 2020.
10. Ms Anushka S Rao has undergone a 5.5 hours course on "Solidworks 2018 – Become an Expert (Beginner to Advanced)" through Udemy E-Learning on 16th April 2020.
11. Mr Ashwin Quadras has completed Coursera online non- credit specialization certification course "Digital Manufacturing & Design Technology" on 27th July 2020.
12. Mr Chirag I P has completed Coursera online certification course "Crash Course on Python" on 31st May 2020.
13. Mr Chirag I P has completed Coursera online certification course "Welcome to Game Theory" on 27th May 2020.
14. Mr Cletus Angleo Dsouza has completed Coursera online certification course "Machine Learning" on 16th March 2020.
15. Mr Cletus Angleo Dsouza has completed Coursera online certification course "The Data Scientist's Toolbox" on 17th March 2020.
16. Mr Nithin Kumar P has completed Coursera online certification course "Machine Learning for All" on 13th May 2020.
17. Mr Nishcalkumar Naik has successfully completed a course on "Introduction to Rocket Propulsion" with a score of 76% from NPTEL Online Certification from July- Oct 2019.
18. Mr Olsten Joydon D'Souza has completed Coursera online certification course "Machine Learning for All" on 7th July 2020.

19. Mr Rahul P Ullal has completed Coursera online certification course "Introduction to Basic Vibrations" on 31st July 2020.
20. Mr Nithin Kumar P has completed Coursera online certification course "Digital Manufacturing & Design" on 14th May 2020.
21. Mr Olsten Joydon D'Souza has completed Coursera online certification course "Oil & Gas Industry Operations and Markets" on 22nd May 2020.
22. Mr Olsten Joydon D'Souza has completed Coursera online certification course "Digital Manufacturing & Design" on 12th May 2020.
23. Mr Rahul P Ullal has completed Coursera online certification course "Intelligent Machining" on 29th July 2020.
24. Mr Rohan Dominic D'souza has completed Coursera online certification course "Programming for Everybody (Getting Started with Python)" on 5th July 2020.
25. Mr Satvik Karkera has completed Coursera online certification course "AI for Everyone" on 16th June 2020.
26. Mr Satvik Karkera has completed Coursera online certification course "Write Professional Emails in English" on 19th June 2020.
27. Ms Sharadhi has completed Coursera online certification course "AI for Everyone" on 2nd August 2020.
28. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Build a Simple App in Android Studio with Java" on 14th June 2020.
29. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Wind Energy" on 26th July 2020.
30. Mr Suhal S Bangera has completed Coursera online certification course "Introduction to Engineering Mechanics" on 1st August 2020.
31. Mr Suhal S Bangera has completed Coursera online certification course "Leadership and Emotional Intelligence" on 17th August 2020.
32. Mr Suhal S Bangera has completed Coursera online certification course "Electric Power Systems" on 13th June 2020.
33. Mr Suhal S Bangera has completed Coursera online certification course "Spreadsheets for Beginners using Google Sheets" on 24th July 2020.
34. Mr Suhal S Bangera has completed Coursera online certification course "Energy-The Enterprise" on 18th June 2020.
35. Mr Suhal S Bangera has completed Coursera online certification course "Wind Energy" on 19th July 2020.
36. Mr Suhal S Bangera has completed Coursera online certification course "Safety in Utility Industry" on 17th June 2020.


Mr Suhal S Bangera

37. Mr Suhal S Bangera has completed Coursera online certification course "Mind Control: Managing Your Mental Health During COVID-19" on 17th July 2020.
38. Mr Suhal S Bangera has completed Coursera online certification course "Material Science- 10 Things every Engineer Should Know" on 17th July 2020.
39. Mr Suhal S Bangera has completed Coursera online certification course "Digital Manufacturing & Design" on 14th June 2020.
40. Mr Suhal S Bangera has completed Coursera online certification course "Natural Gas" on 14th June 2020.
41. Mr Suhan S Bangera has completed Coursera online certification course "Introduction to Engineering Dynamics" on 1st August 2020.
42. Mr Suhan S Bangera has completed Coursera online certification course "Electric Power Systems" on 14th July 2020.
43. Mr Wilson Christopher D'Souza has completed Coursera online certification course "Introduction to Virtual Reality" on 17th May 2020.
44. Mr Raison C D'souza has completed Coursera online certification course "Programming for Everybody (Getting Started with Python)" on 28th July 2020.
45. Mr Raison C D'souza of has completed Coursera online certification course "Python Data Structures" on 31st July 2020.
46. Mr Ravish M has completed Coursera online certification course "Intelligent Machining" on 28th July 2020.
47. Mr Ravish M has completed Coursera online certification course "Introduction to Programming with MATLAB" on 5th July 2020.
48. Mr Ravish M has completed Coursera online certification course "Fundamentals of Fluid Power" on 30th July 2020.
49. Mr Ravish M has completed Coursera online certification course "Programming for Everybody (Getting Started with Python)" on 30th July 2020.
50. Mr Darshith, Mohan Sapalya has completed Coursera online certification course "Mind Control: Managing Your Mental Health During COVID-19" on 13th August 2020.
51. Mr Mahammad Sinan A S has completed Coursera online certification course "RPA Lifecycle: Introduction, Discovery and Design" on 14th July 2020.
52. Mr Mahammad Sinan A S has completed Coursera online certification course "AI for Everyone" on 15th June 2020.
53. Mr Mahammad Sinan A S has completed Coursera online certification course "Initiating and Planning Projects" on 7th June 2020.
54. Mr Mahammad Sinan A S has completed Coursera online certification course "Excel Skills for Business: Essentials" on 14th July 2020.


Mr Mamammad Sinan A S

55. Mr Mahammad Sinan A has completed Coursera online certification course “Machine Learning for All” on 13th June 2020.
56. Mr Mahammad Sinan A S has completed Coursera online certification course “Data Science Math Skills” on 23rd June 2020.
57. Mr Mahammad Sinan A S has completed Coursera online certification course “Introduction and Programming with IoT Boards” on 5th June 2020.
58. Mr Mahammad Sinan A S has completed Coursera online certification course “Cybersecurity in Manufacturing” on 15th June 2020.
59. Mr Mahammad Sinan A S has completed Coursera online certification course “Cloud Computing Basics” on 22nd June 2020.
60. Mr Mahammad Sinan A S has completed Coursera online certification course “Introduction to Solar Cells” on 14th July 2020.
61. Mr Mahammad Sinan A S has completed Coursera online certification course “Leadership and Emotional Intelligence” on 6th July 2020.
62. Mr Mahammad Sinan A S of has completed Coursera online certification course “Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360” on 7th July 2020.
63. Mr Mahammad Sinan A S has completed Coursera online certification course “Programming for Everybody (Getting Started with Python)” on 23rd June 2020.
64. Mr Mahammad Sinan A S has completed Coursera online certification course “Python Data Structures” on 14th July 2020.
65. Mr Rahul P Ullal has undergone a course on “Learning Python” through Linkedin Learning on 30th July 2020.
66. Mr Rahul P Ullal of has undergone a course on “Introduction to Geometric Dimensioning and Tolerancing” through Linkedin Learning 29th July 2020.
67. Mr Rahul P Ullal has successfully completed a course on “Laws of Thermodynamics” with a score of 95% from NPTEL Online Certification from Jan to Feb 2020 (4 weeks course).
68. Ms Sharadhi of has completed Coursera online certification course “Programming for Everybody (Getting Started with Python)” on 22nd July 2020.
69. Mr Mahammad Sinan A S has successfully completed a course on “Innovation by Design” with a score of 59% from NPTEL Online Certification from Feb- Mar 2020 (4 weeks).
70. Mr Mahammad Sinan A S has successfully completed a course on “Non Traditional Abrasive Machining Processes Ultrasonic, Abrasive Jet and Abrasive Water Jet Machining” with a score of 83% from NPTEL Online Certification from Jan- Feb 2020 (4 weeks).
71. Mr Mahammad Sinan A S has successfully completed a course on “Laws of Thermodynamics” with a score of 86% from NPTEL Online Certification from Jan- Feb 2020 (4 weeks).
72. Mr Ryan Mario Fernandes has undergone a self-paced training course on “Introduction to Symbolic Math with MATLAB” through MathWorks Training Services on 18th March 2020.
73. Mr Ryan Mario Fernandes has undergone a self-paced training course on “Solving Nonlinear Equations with MATLAB” through MathWorks Training Service on 6th April 2020.
74. Mr Sairam Shenoy has successfully completed online course on “Career Edge – Knockdown the Lockdown”, organized by TCS iON from 27th April to 22nd June 2020.
75. Mr Shravan Kumar has successfully completed a course on “Marketing Management-1” with a score of 66% from NPTEL Online Certification from July to September 2019 (8 weeks course).
76. Mr Stephen D’Souza has successfully completed a course on “Ergonomics in Automotive Design” with a score of 70% from NPTEL Online Certification from July- August 2019 (4 weeks course).
77. Mr Vighnesh has successfully completed a course on “Inspection and Quality Control in Manufacturing” with a score of 54% from NPTEL Online Certification from Feb to Mar 2019 (4 weeks course).
78. Mr Shivaprasad C Shettigar has completed Coursera online certification course “Material Science- 10 Things every Engineer Should Know” on 28th July 2020.
79. Mr Suhan S Bangera has successfully completed a course on “Fundamentals of Automotive System” with a score of 91% from NPTEL Online Certification from Jan to April 2020.
80. Mr Suhan S Bangera has completed Coursera online certification course “Material Science- 10 Things every Engineer Should Know” on 14th July 2020.
81. Mr Mahammad Sinan A S has undergone a course on “Cybersecurity and Internet of Things” on 23rd June 2020.
82. Mr Mahammad Sinan A S has undergone a course on “I4.0x: Industry 4.0: How to Revolutionize your Business” through edX on 13th July 2020.
83. Mr Suhal S Bangera has successfully completed a course on “Python for Machine Learning’”, organized by Great Learning in August 2020.
84. Mr Raison C D’souza has successfully completed a course on “Automatic Control” with a score of 100% from NPTEL Online Certification from Jan to Mar 2020 (8weeks course).
85. Mr Raison C D’souza has undergone a 4.5 hours course on “MATLAN/SIMULINK Masterclass” through Udemy E-Learning on 7th September 2019.

86. Mr Darshith Mohan Sapalya has successfully completed a course on "Fundamentals of Automotive System" with a score of 87% from NPTEL Online Certification from Jan- April 2020 (12 weeks).

87. Mr Rahul P Ullal has undergone a self-paced training course on "MATLAB Fundamentals" through MathWorks Training Services as of 14th July 2020.

88. Mr Rolson Benoy Monteiro has completed Coursera online certification course "Business Writing" on 10th June 2020.

89. Mr Rolson Benoy Monteiro has completed Coursera online certification course "Graphic Design" on 20th June 2020.

90. Mr Rolson Benoy Monteiro has completed Coursera online certification course "Intelligent Machining" on 15th May 2020.

91. Mr Ryan Mario Fernandes has completed Coursera online certification course "Engineering Project Management: Initiating and Planning" on 6th May 2020.

92. Mr Ryan Mario Fernandes has completed Coursera online certification course "Excel Skills for Business: Essentials" on 11th May 2020.

93. Mr Ryan Mario Fernandes has completed Coursera online certification course "Introduction to Thermodynamics: Transferring Energy from Here to There" on 11th April 2020.

Mr Ryan Mario Fernandes

94. Mr Samyukth D has completed Coursera online certification course "Digital Manufacturing & Design" on 13th May 2020.

95. Mr Sandeep I, Mr Samyukth D has completed Coursera online certification course "Machine Learning for All" on 1st May 2020.

96. Mr Satvik Karkera has completed Coursera online certification course "Blockchain Basics" on 6th June 2020.

97. Mr Satvik Karkera has completed Coursera online certification course "Google Cloud Platform Fundamentals: Core Infrastructure" on 13th June 2020.

98. Mr Satvik Karkera has undergone a 6-week online course on "Programming with Python" through Internshala Training from 15th March to 26th April 2020.

99. Ms Sharadhi of Department of Mechanical Engineering has completed Coursera online certification course "Python Data Structures" on 22nd July 2020.

100. Mr Deepak V has participated in the three day online "Machine Learning using Phython", organized by St Joseph Engineering College, Mangaluru on 28th July 2020.

101. Mr Deepak V has participated in the three day online "Artificial Intelligence and its Applications", organized by St Joseph Engineering College, Mangaluru on 3rd July 2020.

102. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Electric Power Systems" on 14th June 2020.

103. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Leadership and Emotional Intelligence" on 16th July 2020.

104. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Digital Manufacturing & Design" on 14th June 2020.

105. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Mind Control: Managing Your Mental Health During COVID-19" on 22nd June 2020.

106. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Natural Gas" on 14th June 2020.

107. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Safety in Utility Industry" on 17th June 2020.

Mr Shivaprasad C Shettigar

108. Mr Shivaprasad C Shettigar has completed Coursera online certification course "Spreadsheets for Beginners using Google Sheets" on 28th July 2020.

109. Mr Suhal S Bangera has completed Coursera online certification course "Build a simple App in Android Studio Using Java" on 13th June 2020.

110. Mr Varun M has completed Coursera online certification course "Introduction to Engineering Dynamics" on 14th July 2020.

Mr Darshith Mohan Sapalya

111. Mr Darshith Mohan Sapalya has completed Coursera online certification course "Build a Simple App in Android Studio with Java" on 10th August 2020.

112. Mr Darshith Mohan Sapalya has completed Coursera online certification course "Digital Manufacturing & Design" on 10th October 2020.

113. Mr Shivaprasad C Shettigar has successfully participated in the certification exam on "The Fundamentals of Digital Marketing" organized through Google Digital Garage on 15th July 2020.

114. Mr Suhal S Bangera has successfully participated in the certification exam on "The Fundamentals of Digital Manufacturing" organized through Google Digital Garage on 15th July 2020.

115. Mr Deepak V has undergone a certification exam on "The fundamentals of Digital Marketing" through Google Digital E-Learning on 24th July 2020.

STUDENTS ACHIEVEMENTS– Cultural Activities 2019-20

1. Mr Yashadeep Rai A M, Mr Varun L, Mr Vaishak N Poojary, Mr Vikas Divakara Shetty, Mr Mario Melroy, Mr Calvin Benjamine Pinto, Mr Yashadeep Rai A M have secured Second Place in Stomp That (Eastern Dance) during Incridea'20 at NMAM Institute of Technology, Nitte on 15th February 2020.
2. Mr Yashadeep Rai A M, Mr Sowrav, Mr Mohamad Sahil Nazeer, Mr Puneeth, Mr Vishwas, Mr Prajwal S Shetty, Ms Siya Shetty, Mr Dhanush Alake, Mr Vishal Sherwin Jeshwa Monteiro have secured Second Place in Kalakaar during Incridea'20 at NMAM Institute of Technology, Nitte on 18th February 2020.
3. Mr Vikas Shetty has secured Second Place in Duet Dance (Western) during Incridea'20 at NMAM Institute of Technology, Nitte on 15th February 2020.
4. Mr Yashadeep Rai A M has secured First Place in Step It Up during Aakriti-2020, an Inter Collegiate Techno-Cultural Fest organized by Canara Engineering College, Benjanapadavu during 27th to 29th February 2020.
5. Mr Yashadeep Rai A M has secured First Place in Thandava during Envision-2020, a National Level Techno-Cultural Fest organized by Srinivas Institute of Technology, Mangaluru on 4th and 5th March 2020.
6. Mr Prajwal Shetty, Mr Vishal Sherwin Jeshwa Monterio, Mr Yashadeep Rai A M and Mr Neeraj Shetty have secured First Place in Mad Ads held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12th and 13th March 2020.
7. Mr Prajwal Shetty and Mr Yashadeep Rai A M have secured Second Place in Movie Making held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12th and 13th March 2020.
8. Mr Prem Sagar Thumbe has secured First Place in Treasure Hunt held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12th and 13th March 2020.
9. Mr A Dhanush has secured First Place in Mad Ads held during a National Level Technical & Cultural Fest Sambhram'20 organized by Shree Devi Institute of Technology, Kenjar on 12th and 13th March 2020.

STUDENTS PARTICIPATION – Cultural Activities 2019-20

1. Mr Vaishak N Poojary, Mr Neil Lasrado, Ms Sweedal Pinto, Mr Mario Melroy have participated in Nritya-Eastern Dance Competition held during a National Level Cultural Fest Incident 2020 organized by National Institute of Technology, Surathkal from February 27th to 1st March 2020.
2. Mr Mario Melroy, Mr Neil Lasrado, Mr Calvin Benjamine Pinto and Mr Varun L have participated in Step Hoppers- Dance Competition held during a State level Inter Collegiate Techno-Cultural Fest Aakar-2020 organized by A J Institute of Technology, Mangaluru on 6th and 7th March 2020.

"I am very happy to inform you that I have completed many online courses during the lockdown period. I have completed 29 online certification courses from Coursera related to Python programming, AI and ML, IOT, RPA robotics, digital manufacturing, product management, Excel skills, project management, leadership skills, solar cells etc.

I wanted to utilize the free time during the lockdown period in a most beneficiary way by learning new things related to latest technologies. SJEC had collaborated with Coursera and through that I got a wonderful opportunity to do courses of my interest. I would like say thank you to SJEC for providing the best opportunity to make best use of lockdown period. Coursera certifications helped me to understand the current technologies used by the industries. There were also some projects that we had to do at the end of the course. This helped me to know the practical applications better. I had the time management plan to do different academic activities that helped me to do more courses of my interest. The certifications for the Coursera courses are offered by the foreign universities.

I had also completed 3 courses from SWAYAM NPTEL in the duration January to May 2020. The inspiration for doing the NPTEL courses actually came from HOD and other faculties of our Department. In the notice board I noticed that our department faculty were doing NPTEL courses. So I took the inspiration from them and completed 3 NPTEL courses. I also done a course from edX and I got the access to it through the SJEC.

By doing online courses related to different topics from various platforms I have gained lot of knowledge and skills that is required. The courses that I have from various platforms are really going to help in the future along with my Engineering degree. It is better to have certifications along with the degree."

Mahammad Sinan A S
3rd Year Mech Engg

STUDENTS ACHIEVEMENTS– Sports 2019-20

Mr Shravan Kumar

1. Mr Shravan Kumar emerged as Second runner up in NITK Diamond Jubilee Cup Table Tennis Tournaments held at NITK, Surathkal from 4th to 6th October 2019.
2. Mr Shravan Kumar emerged as runners up in VTU Mangaluru Zone Table Tennis Tournament, AJIET, Mangaluru, on 16th November 2019.
3. Mr Shravan Kumar entered the pre-quarter finals in VTU Inter Zone Table Tennis Tournament, BMSCE, Bengaluru, on 26th & 27th November 2019.
4. Mr Mohammed Ismail Jaseem won 2nd Place in below 57kg category Wrestling Championship held at VTU Single Zone Wrestling Championship, SJCIT, Chikballapur on 6th and 7th September 2019.

Ms Bhoomika P Acharya

5. Mr Nibin Binu won 3rd Place in below 97kg category Wrestling Championship held at VTU Single Zone Wrestling Championship, SJCIT, Chikballapur on 6th and 7th September 2019.
6. Mr Muhammad Fayaz won 3rd Place in below 92kg category Wrestling Championship held at VTU Single Zone Wrestling Championship, SJCIT, Chikballapur on 6th and 7th September 2019.
7. Mr Clyde Denis D'Souza, Mr Shravan Kumar, Mr Viyol Ezekiel Crasto, Mr Nithish Santhosh Shetty have won 3rd Place the tournament held at VTU Mangalore Zone Basket Championship, NMAMIT, Nitte on 17th September 2019.
8. Ms Bhoomika P Acharya won 3rd Place in the tournament held at VTU Mangaluru Zone Throwball Tournament, SCEM, Adyar on 3rd October 2019.
9. Mr Dhanush won 1st Place in below 60kg category Best Physique Championship held at VTU Single Zone Weight Lifting & Best Physique Championship, Sri Sairam CE, Bengaluru, on 14th and 15th October 2019.

10. Mr Ganesh won 3rd Place in below 80kg category Best Physique Championship held at VTU Single Zone Weight Lifting & Best Physique Championship, Sri Sairam CE, Bengaluru, on 14th and 15th October 2019.
11. Mr Nithish Santhosh Shetty - (Team Captain), Mr Siddiq Ali, Mr Sampath Kumar M, Mr Shashank H, Mr Macquin Rebello, Mr Nikhil K S emerged as Second runners up in NITK Incident-2020 Volleyball Tournament held at NITK, Surathkal from 28th & 29th February 2020.
12. Mr Nithish Santhosh Shetty - (Team Captain), Mr Siddiq Ali, Mr Sampath Kumar M, Mr Shashank H, Mr Macquin Rebello, Mr Nikhil K S emerged as runners up in VTU Mangaluru Zone Men's Volleyball Tournament held at VCEI, Puttur on 5th March 2020.
13. Mr A. Dhanush of Department of Mechanical Engineering secured second place in District Body Building Championship held at MDS Padil, Puttur on 7th March 2020.
14. Mr A. Dhanush of Department of Mechanical Engineering secured third place in District Bermuda Model Category Championship held at MDS Padil, Puttur on 7th March 2020.

STUDENTS PARTICIPATION – Sports 2019-20

1. Mr Nasikh Mohamood C L, Mr Puneeth P, Mr Swebert Ralph Dsouza, Mr Manoj Lobo have participated in VTU Mangaluru Zone Shuttle Badminton Tournament held at NMAMIT, Nitte on 24th August 2019.
2. Mr Shanees T has participated in below 86kg category Wrestling Championship held at VTU Single Zone Wrestling Championship, SJCIT, Chikballapur on 6th and 7th September 2019.
3. Mr Floyd Christopher Saldanha has participated in below 120kg category Wrestling Championship held at VTU Single Zone Wrestling Championship, SJCIT, Chikballapur on 6th and 7th September 2019.
4. Mr Mohammed Ismail Jaseem has participated in below 57kg category Judo Championship held at VTU Single Zone Judo Championship, SJCIT, Chikballapur on 6th and 7th September 2019.
5. Mr Sanjay Jacob George has participated in All India South Zone Hockey Tournament held at Bengaluru Central University, Bengaluru from 11th to 16th October 2019.
6. Mr Richard Mannil Thomas has participated in 5000 mtr and 10000 mtr held at VTU Single Zone Athletic Meet 2019, GNDCE, Bidar from 22nd to 25th October 2019.
7. Mr Shashank H of has participated in 800 mtr, 1500 mtr and qualified for final rounds in both events held at VTU Single Zone Athletic Meet 2019, GNDCE, Bidar from 22nd to 25th October 2019.
8. Mr Muhammad Fayaz has participated in below 83 kg category held at VTU Single Zone Power Lifting Championship, NMAMIT, Nitte from 30th & 31st October 2019.
9. Mr Shanees T has participated in below 93 kg category held at VTU Single Zone Power Lifting Championship, NMAMIT, Nitte from 30th & 31st October 2019.
10. Mr Shanees T has participated in shot-put held at VTU Single Zone Athletic Meet 2019, GNDCE, Bidar from 22nd to 25th October 2019.
11. Mr Akash Lobo G, Mr Macquin Gilbert Rebello, Mr Daryl Elroy Lewis,Mr Nithish Santhosh Shetty, Mr Floyd Christopher Saldanha, Mr Sampath Kumar M, Mr Shane Carnel Sequeira, Mr Richard Mannil Thomas, Mr Viyol Ezekiel Crasto have participated in the Tournament held at VTU Rest of Bengaluru Zone Netball Tournament, VDRIT, Haliyal from 9th and 10th November 2019.

12. Mr Nithish Santhosh Shetty - (Team Captain), Mr Siddiq Ali, Mr Sampath Kumar M, Mr Shashank H, Mr Macquin Rebello, Mr Nikhil K S participated in VTU Inter Zone Volleyball Tournament held at SDMCIT, Dharwad on 9th March 2020.
13. Mr Siddiq Ali, Mr Kiran Kumar B, Mr Melroy Sequeira, Mr Vajra Kumar ,Mr Hithesh Raj, Mr Venkatesh Parameshwar Mukri, Mr Ashwath Mestha participated in VTU Mangaluru Zone Men's Cricket Tournament held at SCEM, Adyar & NMAMIT, Nitte on 11th March 2020.

LIST OF STUDENT PROJECTS 2019-20

Design and Fabrication Projects:

1.	Non- Newtonian Fluid Speed Breaker
2.	Air/Land Mist Blower Attachment
3.	Development of Sun Dried Agro Processing Machine.
4.	Development of Low Noise Generating Ceiling Fan.
5.	Design and Fabrication of Rough Terrain Rover
6.	Development of Portable Fire Extinguisher using Acoustic Waves
7.	Design and Fabrication of an Energy Efficient Bicycle for Agricultural Purpose
8.	Fabrication of Air to Water Generator. (Atmospheric Water Generator)
9.	Manually operated Pesticide Sprayer.
10.	Research and Development of Combined Wheelchair and Bed.
11.	Stir Casting Device
12.	Fabrication of Effective Dry Waste Segregates
13.	Morphing of Wings
14.	Design and Study of Rocket Fins
15.	A study on the quantity of water evaporated at Thumbay Dam in coastal region and to develop a system to condensate as pure water
16.	Two Stage Mechanical Oscillator

Thermal Projects:

1.	Effect of Injection Timing and Inlet Temperature on Performance and Emission of Diesel Engine.
2.	Waste Heat Recovery from the exhaust of an IC Engine
3.	Automatic Control of Air Conditioning System in Car.
4.	Portable Vehicle Exhaust Air Purifier Unit for Pollution Control.
5.	Study of Diesel Engine Performance using 100% Preheated Bio-Diesel Fuel
6.	Development and Implementation of Turbocharger with Intercooler in Petrol Engine of Two-Wheeler
7.	Thermoelectric Test Rig
8.	Waste Plastic Fuel in Engines

- **Additive Manufacturing is a rapidly growing manufacturing process in mechanical engineering field.**
- **Biomechanical Engineering is a field that applies mechanical engineering principles and materials science to the study of biomedical systems.**
- **A great real-world example of fluid dynamics, is how blood flows through damaged and narrowed blood vessels.**

Material Science/Manufacturing and Management Projects:

1. Study on the Effect of ECAP Pressing Speed on the Properties of ZE41 Alloy
2. A Research on Starch Based Bioplastics
3. Effect of Multiaxial Forging on the Micro Structure and Wear Properties of Magnesium Alloy
4. Effect of MOS_2 Particles on the Mechanical Properties of Epoxy Glass Polymer Composites.
5. Use of Novel metal alloys for Pitot Tube
6. A study on effect of TiO_2on Glass Fibre Reinforced Epoxy Composites
7. Metal Matrix Composite Reinforced with Coconut Shell Ash.
8. Characterization of Glass and Hemp Composites.
9. Study on the effect of heat treatment on the properties of Mg alloys
10. Study on Mechanical and Wear Behaviour of SiC Reinforced Al Si MMC.
11. Study of Shrinkage Variation for Carbide Sintered Products
12. Effect of r-Go on the Mechanical properties of Iron

Interdisciplinary Projects:

1. Design and Development of Humanoid Arm
2. IOT Based Accident Prevention using Alcohol Sensor.
3. Automatic Seeding Machine
4. Pesticide Spraying Drone
5. Walking Assist for Physically Disabled.
6. Design and Fabrication of Automated Guided Vehicle (AGV) for Seed Sowing and Monitoring Applications.
7. Seed Sowing and Chemical Spraying Machine

LIST OF KSCST FUNDED PROJECTS 2019-20

Sl No.	Project Title	Name of the Guide	Name of the Students	Sanctioned Amount (Rs)
1	Development of Portable Fire Extinguisher using acoustic waves	Dr James Valder	Mr Preetham Vianny Correa Mr Rahil Usman Mr Mohammed Hisham Mr R Daniel	5000.00
2*	Design and Fabrication of Combined Wheelchair and Bed	Mr Yathish Kumar Dr Binu K G	Mr Preetham Anthony D Almeda Mr Naveen G Chalwadi Mr Paramvir Singh Chambyal Mr Rion Francis Pinto	5000.00
3	Design and Development of Humanoid Arm	Dr Binu K G	Mr Kawshik Shetty Mr Joshua Mark Serrao Mr Darren Ben Dsouza Mr Nazreth Samson Dsouza	5000.00

*** This project has won the Best Project Award from the KSCST.**

CAMPUS PLACED STUDENTS 2019-20

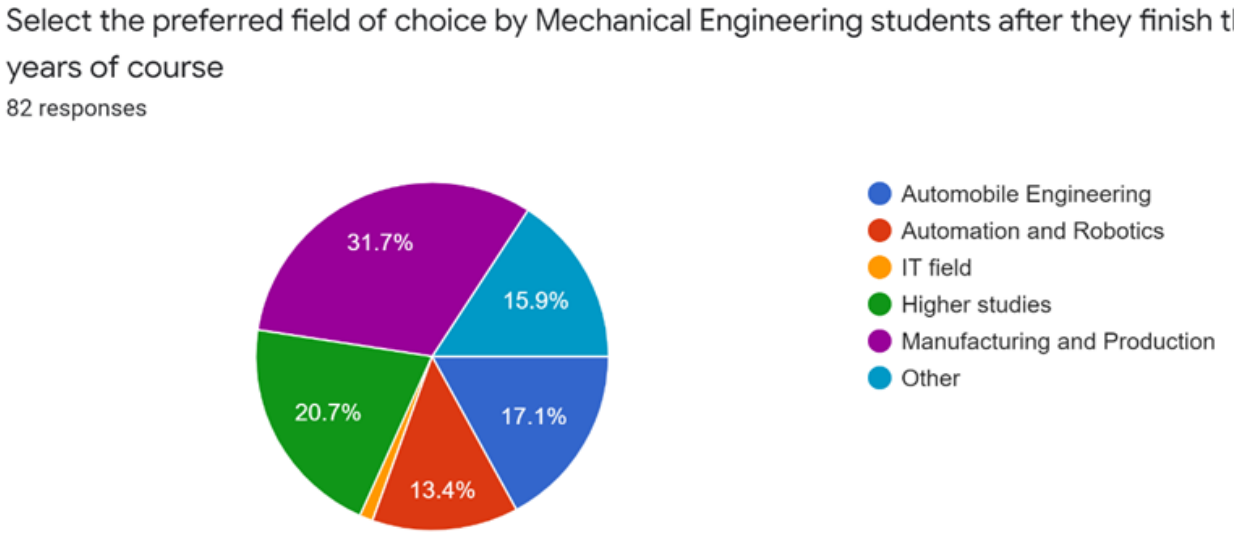
[24]7 DXC Technology	**Amazon**	**Diya Systems Bijus**	**Infosys**	**Amazon**
				
Richard Thomas	Aaron Joe D Souza	Akash Lobo G	Ashley Relston	Nishal
Kreatio Software	**Diya Systems**	**Cognizant Diya Systems Lohatech**	**Amazon**	**Infosys**
				
Daryl Elroy Lewis	Athar Pranam	Chirag I P	Deepak Shetty K	Paramvir Singh Chambyal
Amazon	**Amazon**	**Amazon**	**Amazon**	**Bosch DXC Technology**
				
Glenn Nestor Pinto	Harsha Kiran M	Deon Vishal Fernandes	Melrick Pais	Shreya S
Diya Systems	**Amazon**	**Artech**	**Artech**	**DXC Technology**
				
Joshua Mark Serrao	Kawshik Shetty	Kevin Freddy Fernandes	Nihal Naveed	Swathika
Amazon	**DXC Technology**	**Manipal Technologies**	**Infosys**	**Amazon Lakshmi Sreedharan**
				
Nishan T	Pawan Kumar Shetty	Sampath Kumar M	Raghav Bhattarai	Ranjan K N

CAMPUS PLACED STUDENTS 2019-20

Amazon Bosch Automotive Electronics	DXC Technology	ITC Infotech	Diya Systems	Infosys
				
Roydon D Souza	Sukesh Naik	Sukumara	Yathiraj	Alstan Preesal
DXC Technology	**[24]7**	**Verzo Yellow Messenger**	**Amazon DXC Technology**	**Indian Navy Kreatio Software**
				
Yvon Francis Fernandes	A.M.Raziq	Aloysius Mathew D'Silva	Ashton Joshua Lobo	Chirag Rai
Amazon	**Amazon**	**DXC Technology**	**DXC Technology**	**Verzo**
				
Amin Sujesh Ramesh	Manjush V K	S Nagabhushan Shet	Safwan	Shanees T
Amazon	**Amazon**	**Artech**	**Amazon**	**Anglo- Eastern Ship Management**
				
P Ajeyakrishna Karanth	Royed Pinto	Shivaram R	Sumanth M Indra	Rahul Jagadeesh Salian
Anglo- Eastern Ship Management Amazon	**Anglo- Eastern Ship Management**			
				
Vignesh A Hegde	Swebert Ralph Dsouza			

The Department of Mechanical Engineering congratulates all the placed students and wishes them a successful career ahead.

Opinion Poll



ACADEMIC ACHIEVER

Sanjay Mohunta
VII Sem M2

A. Dear Sanjay, you have excelled in academics over the past four years. Please share your reasons for the success.
Ans: Only hard work and determination can lead to desirable results. Concentration and interest in a particular subject/field of study play a key role in academic achievements. Studying is a life-long process. Studying to gain and improve the knowledge of one's self is paramount rather than studying from the perspective of examinations.

B. What are your memorable achievements in SJEC?
Ans: I was the branch topper for three consecutive academic years in SJEC. Achieving academic excellence motivated me to strive and excel so as to achieve overall character and personality development.

C. How has your academic learning prepared you for a career in the industry?
Ans: The fundamental concepts that we learn at an under-graduate level is very much essential for a future in the technical field. The skillset that one acquires during the academic learning process never goes waste. Always adapting to the latest trends in technology and building skills apart from academic curriculum also play an important role.

D. Advice/Suggestions to the junior students to achieve good academic performance.
Ans: One need not be intelligent to achieve good academic performance. The key lies in one's ability to interpret, understand and apply the concepts in his/her own way. Once this level of understanding is achieved, one will develop and acquire a natural interest in the respective concepts and thereafter, anyone will definitely be self-motivated to sustain and carry forward his/her academic performance.

E. Your opinion on the academic ambience in the department.
Ans: The Mechanical Department provides excellent facilities for learning. The faculty are very well trained, dedicated, willing to provide any kind of assistance and listen to any inconvenience that is faced by students. The Mechanical Department ensured that the learning atmosphere was relaxed and fun-filled rather than a stressful environment for students.

F. Suggestions to the department for enhancing student's academic performance.
Ans: Students must be motivated and made to believe that they can achieve their goals if they work hard enough. The skillset of all students must be carefully evaluated and a suitable field of work opportunities should be made available through placements. It would really boost the morale of students if the department emphasized more on technical and industrial opportunities for Mechanical students so that their core disciplinary knowledge can be put to good use.

G. Share your thoughts on life at SJEC.
Ans: SJEC provided a wonderful environment for my Bachelor's course. The staff were very well experienced and skilled. The quality and standard of education was really good and well established. SJEC provides an impressive campus and excellent facilities for students. Throughout my four years at SJEC, the college never ceased to amaze me.

H. How would you like to contribute to the department in the future, as an alumnus?
Ans: I would like to stay connected to the SJEC family as an alumnus and work with the faculty for any assistance and exchange of ideas. I would like to stay updated on the innovative progress and research being done by the department and willing to collaborate for any such projects.

SPORTS ACHIEVER

Shanees T, VII Sem

Q.1) First sports event at SJEC, how did it go?
Ans: My first event in SJEC was football match Go For Gold 2016-17. It was after the first month of joining in the college. Our match was against one of the strongest mechanical team in our college and my teammates were not knowing each other as well and still we managed to win that match.

Q.2) Which are the sports events you have taken part in SJEC?
Ans :I have taken part in football ,Cricket, Basketball, Badminton, Tug of war, Athletics , Power lifting, wrestling and Handball.

Q.3) Your Key achievements in sports…
Ans :won in Tug of war for Go For Gold Annual Athletic meet 2020.

Q.4) Why sports is important?
Ans : Sports is way for me to unwind after my long day. It is more of stress buster for me. As it is well known, sports helps to promote mental health ,peace and helps to stay healthy and fit.

Q.5) What is your advice to young sportspersons at SJEC?
Ans: SJEC provides a wonderful platform for sports enthusiasts. So my advice to every josephite with an interest in sports will be to go out there and try your hand at your favorite sport and never give up. It may be tough but keep working on it.

Q.6) Most memorable sporting moment at SJEC?
Ans : we used to participate in tug of war competition which used to be held on Go For Gold Annual Athletic meet every year. For past three year we could reach only till semi finals but this year, just before leaving the college we were able to win the tournament. That was the most memorable sporting moment at SJEC .

Q.7) At this juncture, what you have to say your teammates and PED's?
I would like to thank our physical education director Vaneesha ma'am and our Athletics coach Joyal sir for supporting me and helping me to all throughout my 4 years in SJEC. It was their encouragement and motivation that led me to participate in these sports events without giving up. And I am grateful to have had such amazing teammates who have made life in SJEC a memorable and they have helped through my up and downs and always been with me and encouraged me.

Q.8) Going forward, will you be active in sports? Do you have any specific goals?
Ans: Sports have always been important to me. As of now I don't have any specific goal but definitely I will hold to the sports person in me for as long as I can.

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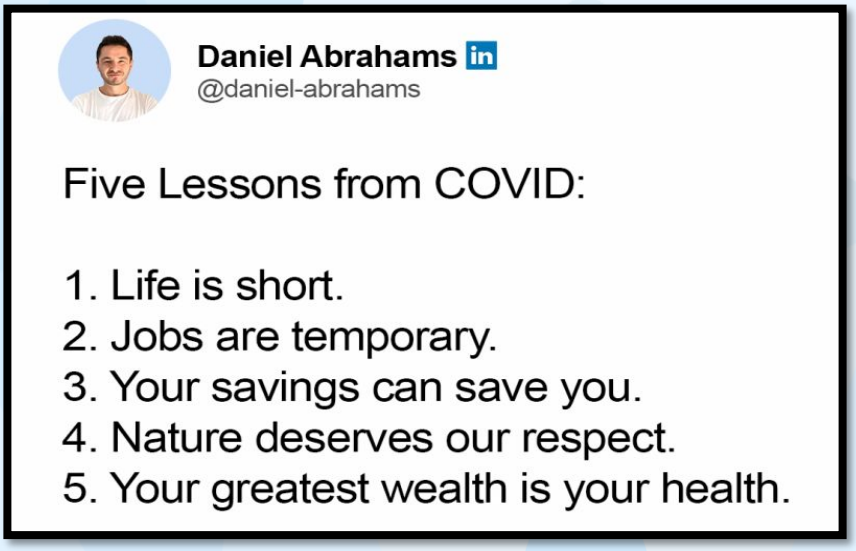
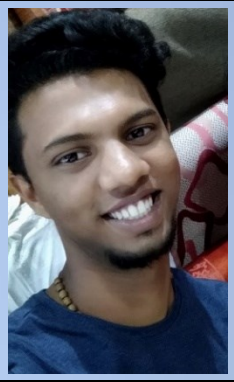


BEST OUTGOING STUDENT



Akash Lobo G
VII Sem M1

Q 1) Dear Akash, you have excelled in academics over the past four years. Please share your reasons for the success.

Firstly, I am very happy to have got this opportunity to address my four years in the college, I would like to answer this question in two parts.

As the first part I would say that VTU is an university that students think that does not address the current issues in the society and also the technology, you will find your self studying things that you might think is irrelevant, But what I see in these subjects is the history of the engineering and the technology you need to know to strengthen your basics. So, I used to spend time learning the topics not from classes but from internet and text books, the time you spend in the class is always 10% of what you need to know. Secondly I always take part in a ton of extracurricular activities and you will not find me in the class, and I still used to manage to score above average, my friends and parents complain I don't study, but only I know that I used to spend most of time learning from YouTube, text books, and my close friends who love debating. I would like to mention "your friends are your building blocks for your success in any field" and the lectures are there to help you learn the basics and not to make you an engineer.

Q 2) What are your memorable achievements in SJEC?

Even from the first year I was very much into making my days productive, I always wanted to keep myself occupied with something, and that is when I was introduced to Team SJEC racing, where a team of very talented and determined students from the college come together to build an ATV (All-Terrain Vehicle). This team TSR changed my life and the way I see engineering. I also took part in many events and won prizes for the college, as I mentioned before I missed most of the classes, and I knew that it was just 10% of what I needed to know, and the remaining 90% I used to learn when I spend my time in the SAE (Society of Automotive Engineers) Workshop. One of the biggest achievements is that I had a very unique bond with the lecturers, the faculty will teach you when you want to learn.

Q 3) What is your advice to the junior students?

There is no much of an advice I could give as each one of you are different and what I say would mean less to you. But I can give a general view of what I would call a life of an engineering student. You should always make sure to do what you love. For those of you who do not know what you love, don't stop asking why you don't love anything, and the quest to that answer will take you to places where you have never been before. Push harder when you are a student as your mistakes will not cost you money, but only your time, which is 100% fine as you have 17,000 odd hours that you will be okay to lose, and no one will ask you. But when you come out of the college you should not be confused because you should have spent all that hours learning about yourself and now you should be ready to take the world.

Q 4) Your opinion on the academic ambience at the department…

We have a department of very talented lecturers, who are not only good at academics but also extra-curriculars. One can find that the department like ours stand out from the other departments for a reason, it is because of how our departments looks at learning. Royal mech has its own ambience, the environment for study and fun at the same time.

Q 5) Suggestions to the department for enhancing students' academic performance…

The department is already doing a great job, but there is always room for improvements. As a student I used to see that there were students who were not at all interested in engineering as a subject with math and calculus, but were really awesome when it comes to applied skills, we need to make sure these kinds of students get the attention needed. They like learning the concepts which has more application, So I would recommend the classes to be more conceptual and applicational.

Q 6) Share your thoughts on life at SJEC.

Life at SJEC was more like a family, I have friends that I can never forget and also contacts that I will treasure. The relationship with the lecturers is also one of the most appreciable things in this college as they treat you more like a friend and make sure you learn not only academics but also life lessons. All the lecturers from the department of mechanical engineering are smart and fun. I would say that the inter department communication is also a very good. I personally remember taking up Dot Net classes and I was thought very well and I was made sure to pass with flying colours. I used to also receive life lessons from some of my teachers, I can never forget them!

Q 7) How would you like to contribute to the department in the future, as am alumnus?

It would be my pleasure to visit and the college and give my feedback for the betterment of the department. However, I am still a part of the Team SJEC Racing and my inputs are always there for the team. I would love to help in any possible way to make it a better place for the future students of the department. Looking forward to have a fruitful relationship with the department.

This is bonus from me to you! Please understand what mechanical engineering is all about. Don't restrict yourself to core mechanical concepts, please look into the cars now a days they are a combination of all the fields. Do learn some coding language, it can be anything. But choose one and stick to it. Same applies to your field of interest too. All the very best, you don't need to be a nerd to top of your class, you can take my word for that.

ALL-ROUND ACHIEVER

Q1. You have enthralled SJEC with your vocal percussion. Share your thoughts on beat boxing and what it means to you?

Beatboxing was always about making music and having fun. No matter how the day went by, I would always turn to beatboxing. Plus you can do it anywhere and at anytime and always learn more about it, maybe discover a unique sound.

Q2. Being a talented beat-boxer, you have also performed well in your academics. How did you find the balance between both?

The key for me was to have a well maintained schedule and I think that helps.

Q3. Do you have any beat-boxer you look up to and draw inspiration from?

There were a few beatboxers that I looked up to when growing up. Tom Thum, Skiller, Alem were the ones that inspired me the most.

All off them were different in the way they approached Beatboxing and that drew me towards them.

Q4. What are the beat-boxing innovations you are still working on?

The most recent sound that's come into the spotlight is the inward base and I am trying my hardest to master that sound.

Q5. What is that one sound you still haven't made with your mouth, if at all any?

I like to keep myself updated with the latest sounds and techniques, I think the inward base is a difficult sound to make and I would say that's something I would like to add to the list.

Q6. What has been your greatest moment as a beat-boxer?

The greatest moments I would say were winning the Beatboxing battle at Adrenaline 2020 and also performing with one of the well-known names in dance industry Mayuri Upadhya and her team Nritarutya.

Vernon Serrao, VII Sem M3 section

Q7. Which are your memorable moments at SJEC?

The whole process of organizing TEDxSJEC was the most memorable moment at SJEC.

Q8. What is your advice to talents at SJEC?

Just have fun, keep learning, growing and working on yourself.

Q9. What are your suggestions to SJEC for promoting talented students?

I would say having more cultural events and competitions gives a much needed platform for all the artists to showcase their talent and boost their confidence.

Q10. Where do you see yourself 10 years from now?

I look forward to working in the renewables energy sector and contributing in that field and spreading awareness about the same.

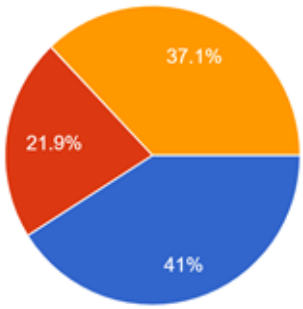
GATE QUALIFIED ALUMNI STUDENTS

- ⇒ Mr Darshan C passed out Mechanical engineering (Class of 2017) student has qualified GATE 2018 with a score of 536 and his score valid till 2021.
- ⇒ Mr Kenneth Paul D'souza C passed out Mechanical engineering (Class of 2017) student has qualified GATE 2018 with a score of 651 and his score valid till 2021.
- ⇒ Mr Jithesh passed out Mechanical engineering (Class of 2018) student has qualified GATE 2019 with a score of 509 and his score valid till 2022.
- ⇒ Mr Mahin Saif Nowl passed out Mechanical engineering (Class of 2018) student has qualified GATE 2019 with a score of 330 and his score valid till 2022.
- ⇒ Mr Deekshith Poojary passed out of Mechanical Engineering (Class of 2019) student has qualified GATE 2020 with a score of 684 and his score is valid till 2023.

Students Feedback on Online Teaching- (March-June 2020)

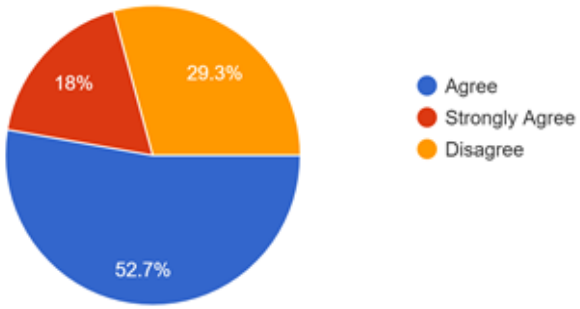
1. Do you prefer online class?

256 responses



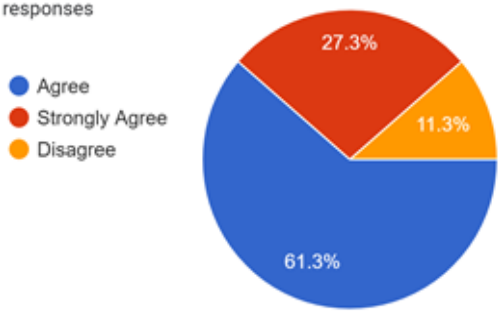
2. Do you prefer the pre-recorded course video before online class?

256 responses



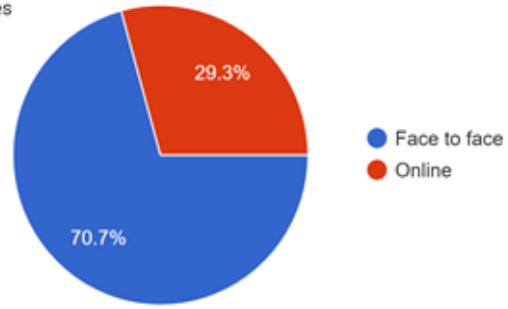
3. Do you prefer the course material before the online class?

256 responses



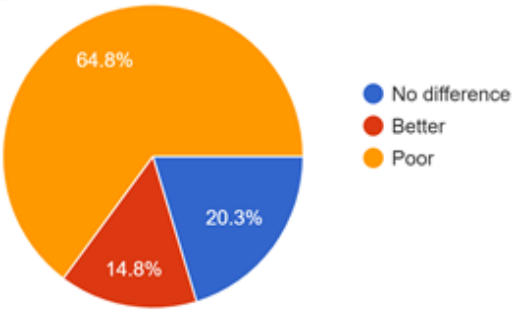
4. Which teaching method do you prefer after epidemic is over?

256 responses



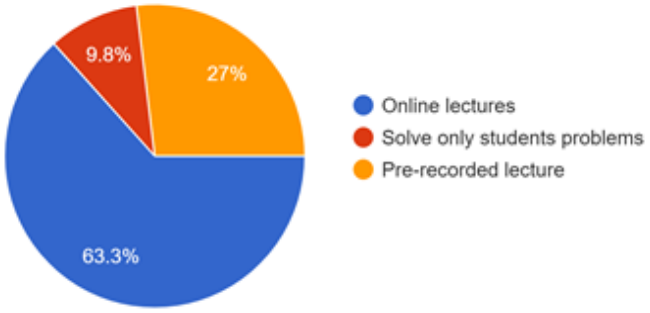
5. How do you compare class interaction in online teaching as compared to face to face teaching?

256 responses



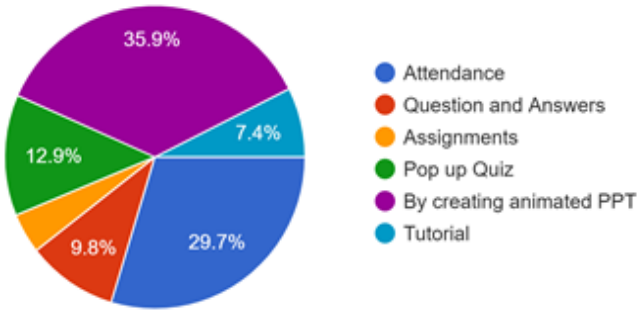
6. What kind of lecture do you prefer in online teaching?

256 responses



7. Suggest a tool that will best engage the students during online class?

256 responses



Association Activities

1. DEPARTMENT STUDENTS' ASSOCIATION: TORQUE

2. SAE INDIA SJEC COLLEGIATE CLUB: TEAM SJEC RACING

5. SAE INDIA SJEC AERO TEAM – DOHA

3. SAE INDIA SJEC COLLEGIATE CLUB: TEAM e-SJEC RACING

4. SAE INDIA SJEC GO-KART TEAM: ARTEMIS

6. ISIE COLLEGIATE CLUB: TEAM – ACHILLIUS

TORQUE

INAUGURATION OF TORQUE

20 September 2019

TORQUE-Students' Association of Mechanical Engineering SJEC was inaugurated on 20 September 2019 in the Kalaam Auditorium. On this occasion oath taking and various activities were conducted for second year students. The oath was administered to the association members and students by Ms. Ramya M, Assistant Professor, Department of Mechanical Engineering. Mr. Vinoothan Kaliveer awarded the prize to the topers of second year.

TORQUE ASSOCIATION - OFFICE BEARERS

Mr Vinoothan Kaliveer
Faculty Coordinator

The TORQUE Association started functioning for the academic year 2019-20 with a total strength of about 90 students. The following students were appointed to represent as the office bearers of the Association:

Name	USN	Designation
Yvon Francis Fernandes	4SO16ME119	President
Swathika	4SO16ME109	Vice President
Raison Christopher D'souza	4SO17ME086	Secretary
Nidhi C Shetty	4SO17ME072	Joint Secretary

Mr Nitheesh D Nayak
Faculty Co-coordinator

The students of Torque association are appointed towards volunteering for various activities conducted in the Department. This serves as a great opportunity to develop necessary skills such as team work, leadership, event management, scheduling and planning, etc.

TORQUE – President's Message

Yvon Francis Fernandes

"Department of Mechanical engineering is filled with talent. We have students here, full of enthusiasm, courage, and the capability to execute any given task with a lot of energy and positivity. "Torque" Students association under the Dept. of Mechanical engineering, is the place where this talent and positive energy is invested by our 'Royal Mechies' in various Departmental and Collegiate level activities. Be it Technical, Cultural, academic-related talks, farewell, or Robo Wars for Tiara!!

The current generation industry apart from academics requires or demands engineers with soft skills, interest in extracurricular activities, sports, etc. Our departmental association has helped our students to gain all these and other few important life aspects like leadership qualities, being a team player, etc. during their college life. Torque also plays an important role in one's academic life too. It helps you to carry out what you learn in your classrooms. You also learn here from your fellow team members directly or indirectly which is a mutual contribution. It improves your knowledge base too. And when you get top-notch support from the departmental staff, association coordinators, it's fun to work around and live your engineering life with a bit of joy by keeping away all the other headaches by utilizing this opportunity wisely. Come! Be a part of this cool, interesting student association, and enhance yourselves professionally".

"ENGINEERS DAY" Celebrations
17 September 2019

"ENGINEERS DAY" Celebrations were held in the Department of Mechanical Engineering, SJEC on 17 Sept 2019. On this occasion various activities were conducted on 16 September 2019 by the TORQUE showcasing the technical skills of its students.

The list-wise events were:

1. Tech-Quiz: Conducted to test the knowledge of the students in the technical field and general awareness. Involved different rounds such as Recent trends in engineering, crossword and puzzle, pick and answer, buzzer and guess logo etc.

2. Tech Hunt: The event consisted of 5 rounds. The participants will be initially given a riddle. The contestants should decipher the riddle which will lead them to their second riddle. The team which deciphers all the riddle and reaches the starting point first will be declared winner.

3. Mr Machinist: was conducted which involved metal hunt, model making, assembly and suspense round

.

4. UDAAN: This was as individual event where participants have to make the paper plane out of A4 sheet. Involved three rounds namely, mass elimination, longest distance and airtime round.

OUTREACH PROGRAM
21 February 2020

Over 40 students of second year Mechanical Engineering along with the Department faculty Mr Ashwin Shetty participated in the clean-up drive at Panambur Beach, Mangaluru on 21 Feb 2020. The activity was conducted as an outreach program under the banner of TORQUE- Mechanical Engineering Students' Association.

The objective of the program was to clean beach and implement Nation's aspiration of 'Swachh Bharath'. The program started with a short briefing on how to clean the beach and safety guidelines to follow. Students collected the garbage of all kinds and origins on the sand, ranging from dangerous objects such as broken bottles, sharp metallic objects, sticks etc. to remains of food and food packages. The amount of garbage retrieved from the little portion of beach was pretty huge. The garbage collected in bags was shipped to dust bin from where it was picked by the municipal waste collecting vehicle. All the participants had actively participated in the beach clean-up drive. Students felt that they could make a small yet impactful contribution towards nature and its inhabitants. Also, they have promised to create awareness among families and societies so that all can contribute in keeping beaches and water bodies clean and not pollute it by throwing plastic and debris.

TECHNICAL TALK
Readiness for Core Engineering Companies
10 February 2020

Mr Rushabh Kathote, Business Development and Program Coordinator from School of Industry Oriented Engineering & Solution, Vijayanagara, Mysuru delivered a talk on "**Readiness for Core Engineering Companies**" for final year Mechanical Engineering students on 10 Feb 2020 at 10:00am in Prerana Hall.

During presentation, speaker mentioned about the challenges in mechanical engineering, present situations in engineering industry, expectations of engineering industry from fresher's, hiring in off campus jobs, factors driving engineering industries. Mr Rushabh Kathote gave a glimpse of the business model, engineering business now and then, role of hand calculations, FEM & FEA in modern engineering applications and how to build a strong profile for MS in core engineering companies.

Speaker also briefed about the unique sponsorship program on Core Design Engineering by School of Industry Oriented Engineering And Solutions. The speaker mentioned about an overview of the syllabus of the 390 hours extensive program and course offerings by the institute.

Later Mr Rushabh Kathote and team conducted the test for the interested students based on the basic concepts of Strength of Material, Machine Design and Material Science. After the test, the speaker recommended the selected students to visit the School of Industry Oriented Engineering And Solutions for more details of the sponsorship program on Core Design Engineering. He also mentioned about 100% fee sponsored program for eligible students.

TECHNICAL TALK
Significance of GATE examination for Mechanical Engineers
And
Government Job Opportunities for Mechanical Engineers
28 February 2020

TORQUE in association with ISTE- Indian Society for Technical Education conducted a talk for III and II year Mechanical Engineering Students on 28th February 2020 at 12:00 PM in Prerana Hall.

Mr. Ananth Pai, Academy in Pursuit of Engineering eXcellence (APEX), Mangaluru delivered a talk on "Significance of GATE examination for Mechanical Engineers". During the presentation, the speaker motivated the students to take up GATE exam and explained how to crack and prepare for it. Mr. Ananth Pai also briefed about the job opportunities that GATE exam can provide to a student. It was followed by a presentation by Mr. Rahul Kumar, Faculty, Mechanical Engineering, SJEC on "Government Job Opportunities for Mechanical Engineers". The speaker updated the students about various government organizations and bodies like UPSC, Defense Service, Indian Railways, DRDO, ISRO and various PSUs that are conducting different examinations to recruit mechanical engineers. Mr. Rahul Kumar also informed the audience about how, when and where to find and apply to these notifications. Later, the spokesperson detailed about various non-technical government examinations like IAS, SSC CGL, Intelligence Bureau and Bank Probationary Officer that a student can uptake which will give good reputation and facilities. The speaker also briefed about different state government examinations and introduced various study materials that students can refer for different types of examinations detailed in the presentation. At the end, Mr. Ananth Pai offered free hand notes on different subjects in mechanical engineering in view of GATE and IES examinations to the interested students.

Message:

"Coming together is a beginning, staying together is progress, and working together is success" – Henry Ford.

Mr Vinoothan Kaliveer
Faculty Coordinator

"TORQUE" - The Mechanical Engineering Students' Association has successfully completed another year with many activities for the students in the Department as well as the external participants. We regret that we could not conduct all the planned activities during the even semester 2019-20 due to the sudden outbreak of COVID 19 virus and lockdown in the country. The Student members in TORQUE developed abilities such as team leadership, team works, event management and accountability. The various activities conducted by the association helped in bringing the liveliness and improved the interactions between students. They worked together as one team in organizing various events of the Association and the Department.

I take this opportunity to congratulate the outgoing batch of students from Class of 2020 for their contribution to the Association. I also look forward for the new batch of TORQUE members to continue the good work of the association.

SAE stands for Society of Automotive Engineers, SAEINDIA is India's leading resource for mobility technology. As an individual member driven society of mobility practitioners, the ownership of SAEINDIA wrests with its members who are Individuals from the mobility community, which includes Engineers Executives from Industry, Government Officials, Academics and Students. It is one of the few professional engineering societies whose membership represents practically every engineering and scientific discipline.

SAEINDIA has over 40,000 student members in more than 495 collegiate clubs located all over India as on August 2020. Collegiate clubs provide practical exposure as a professional engineering society and as a focal point for campus engineering programs and projects.

SAEINDIA is India's leading resource for mobility technology. As an individual member-driven society of mobility practitioners the ownership of SAEINDIA wrests with its members who are Individuals from the mobility community, which includes Engineers Executives from Industry, Government Officials, Academics and Students

SAEINDIA is a strategic alliance partner of SAE International registered in India as an Indian non-profit engineering and scientific society dedicated to the advancement of mobility industry in India

SAE India with its four sections (Bengaluru, Northern & Eastern, Southern and Western) covering entire India, organizing various events for the benefit of Engineering Student community.

Various competitions conducted by SAEINDIA for college students are:

1. TRACTOR DESIGN COMPETITION 2020:

Engineering students entering the industry will be equipped with practical knowledge and design experience. Prepares the students to be effective professional engineers. Tractor Design Competition tasks the students to think, analyse, design, develop, build, test and present a tractor in series of event. Unique Engineering Design Competition for Students with a realistic 360-degree workplace experience.

Students gain practical technical experience in the areas: Design of drive train systems, Tractor performance, Manufacturing processes, Analysis of tractive forces.

2. BAJA SAE INDIA:

The BAJA SAE Series is an event for the undergraduate engineering students, organized globally by the Society of Automotive Engineers, USA. The event originated in the name of Mini - BAJA, in the year 1976 at University of Carolina. Since then, the event has spanned across six countries – USA, Mexico, South Africa, Korea, Brazil and India.

The BAJA SAE tasks the students to design, fabricate and validate a single seater four - wheeled off road vehicle to take part in series of events spread over a course of 3 days that test the vehicle for the sound engineering practices that have gone into it, the agility of the vehicle in terms of gradability, speed, acceleration and manoeuvrability characteristics and finally its ability to endure that back breaking durability test.

Several factors contribute to making a winning buggy. First and foremost, the buggy must meet the strict specification of the rule book. The philosophy hasn't changed since the event's birth back in 1976 – the teams still need to build a simple all-terrain vehicle for recreation purpose that is aesthetically and ergonomically sound while still being a fun and durable machine in the real-world conditions. The evaluation process for the BAJA SAEINDIA is a twofold process and students have to clear the Virtual Baja preliminary round before they start manufacturing their buggy's for the main events.

The teams are judged on six main parameters in the Virtual BAJA event which are – their knowledge of the rule book, the design of the vehicle, the project plan, the design methodology and the design evaluation plain. A total of 400 points are available for each team's design and the top 120 teams were selected this year to complete in the main event.

The evaluation process in the main event is a different ball game altogether and the students finally got to showcase their finished buggy's to the judges. In the static tests the buggy's are evaluation on various factors such as cost, aesthetics and the quality of the fabrication. There are also many dynamic tests such as acceleration. Braking, manoeuvrability over all terrain and a hill climb test. But none of these tests are more gruelling than the endurance race where the drivers and buggy's are pushed to their limits till a winner emerges. The hill climb (above) and the obstacle course (below) are just some of the dynamic tests that the buggy's have to endure to make it to the finish line.

3. SUPRA SAEINDIA:

SUPRA is being organised annually by SAEINDIA with the support of Maruti Suzuki, the event provides a platform for students to apply their engineering skills to design and construct a Formula category vehicle as per defined performance and safety specifications. SUPRA SAEINDIA comprised of a series of Static and Dynamic events spread over five days, concluding with a final Endurance run and a valedictory function.
Static Events Includes: Marketing Presentation, Engineering Design, Cost Evaluation.
Dynamic Events Includes: Acceleration Event, Skid-Pad Event, Autocross Event, Endurance
The SUPRA SAEINDIA events consists a total of 1000 points distributed evenly in the different static and dynamic events.

4. AERO DESIGN CHALLENGE:

SAE Aero Design Challenge SAE Aero Design Challenge competition intended to provide undergraduate and graduate engineering students with a real-life engineering challenge. It exposes participants to the nuances of conceptual design, Manufacturing, System integration and testing. SAE Aero Design features three classes of competition-Regular, Advanced, and Micro. The importance of interpersonal communication skills is sometimes overlooked, yet both written and oral communication skills are vital in the engineering workplace. To help teams develop these skills, a high percentage of a team's score is devoted to the design report and the oral presentation required in the competition.

5. EFFI –CYCLE

"EFFI-CYCLE" derived from Efficient-Cycle promote the objective of providing opportunity to the students to conceive, design and fabricate a three-wheel configuration vehicle powered by human-electric hybrid power and capable of seating two passengers catering to the day to day mobility needs. The vehicle must be aerodynamic, engineered for performance and safety and ergonomically designed. The objective is to promote innovation and generate consciousness amongst the young engineers towards environment friendly mobility solution.

6. GO-KARTING

A go-kart, also written as go-cart (often referred to as simply a kart), is a type of open wheel car. Go-karts come in all shapes and forms, from motor less models to high-powered racing machines. Some, such as Superkarts are able to beat racing cars or motorcycles on long circuits. Many recreational karts can be powered by four-stroke engines or electric motors, while racing karts use a two-stroke or, rarely, higher powered four-stroke engines. Most of them are single seater but some recreational models can accommodate a passenger.

Find us on Facebook

https://www.facebook.com/teamsjec/

SAE INDIA SJEC Collegiate Club

Faculty Advisor's message:

"Take risks: if you win, you will be happy; if you lose, you will be wise." - Swami Vivekananda.

Few inspired mechanical engineering students, who wanted to do something great, teamed up and initiated SAEINDIA- SJEC Collegiate club in this college with the help of the department and college management in the year 2016.

Now four years have passed, and we are moving towards accelerated growth path in the journey. It was challenging and fruitful journey that the club has achieved much more in SAEINDIA BAJA events, Aero challenge competitions and Enduro students India competitions. The club had organised many automobile related workshops, webinars and industrial tours for the betterment of the student members.

Mr Yathish Kumar
SAE Faculty Advisor

The first All-Terrain Vehicle turtle 1.0 was completely designed and fabricated by the student members of "Team SJEC Racing"– a team under the banner of SAEINDIA-SJEC Collegiate club in 2016 and achieved greater heights and set a benchmark for turtle 2.0. Turtle Series 3.0 and 4.0 vehicles and Aero Teams have brought name and fame to the college.

Our club now has teams named Team SJEC Racing – engine powered ATV, Team Artemis - GoKart, Team E SJEC Racing – Electric ATV and Aero Team.

SAEINDIA-SJEC Collegiate club is dedicated to create a plat- form for the students to apply their theoretical knowledge in the practical work and make them industry-ready and in coming years, we are expecting more students to join this, one of the few professional engineering societies that helps in their personal and professional growth.

For the academic year 2019-20, under SAEINDAI SJEC Collegiate club there were following teams and participated in national level events. The teams are:

Team SJEC Racing, Team e-SJEC Racing, Team Artemis – GO-KART and Team AERO

1. Team SJEC Racing:

Team SJEC Racing, a student racing team who build All-Terrain vehicles. The fourth version of this team, TR4 was formed and successfully designed and fabricated IC engine powered ATV.

After the outstanding performance by Teams TR1, TR2 and TR3, the team TR4 was registered on 14 April 2019 with newly recruited 25 students. Recruitment for Turtle 4.0 was done in the month of March and the recruitment process was done in two stages; Pre-assessment test and an interview round. Top 50 of the 150 students who appeared for the pre-assessment test were chosen. The selected candidates undertook the interview and 13 candidates were chosen.

The details of team members are listed:

Sem/Branch	Student Names
7th /ME	**Joshua Fernandes (Team Captain),** Alstan Preesal Lewis, Chirag I P, Chirag Rai, Akash Lobo, Ashley Kevin D'Souza, Orwin Eric Ferrao, Royed Pinto, Zayan Azad, Viyol Ezekiel Crasto
5th/ ME	Siya Shetty, Adriel Fernandes, Koushik K, Grenvil Noronha, C Suhas, Vishwas Prabhu
5th/EC	Lohit, Ligina Mary
3rd/ME	Chethan Shenoy, Rudolph Dsouza, Karthik Naik
3rd/EE	Joel Pereira

Achievements:

SAEINDIA BAJA 2020: 23 to 26 January 2020 at Pithampur, Indore – MP.
Endurance Race: 11;
Rock Crawl: 8; A
cceleration: 20;
Static Event: 23;
Overall Rank: 31
Total Number of Teams 120.

Team Captain Message:

Mr Joshua Fernandes
Team Captain SAE-SJEC

"SAE – Society of Automotive Engineers is a globally active professional association and standard developing organization for engineering professionals in various industries. Integrating the standards of SAE and the interests of students resulted in the formation of the official SAE-SJEC Collegiate Club and has been standing strong since 2016! Being a part of the Club enables the students to dig deeper into various mechanical researches, projects and professionally participate in National and International level competitions. Team SJEC Racing is one of the Oldest teams under the SAE-SJEC Club that participates in the annual National level SAE-MBAJA event held at Pithampur, Indore ever since 2016. The team strives to research, practice, design, develop and test a 4 wheel All Terrain Vehicle (ATV) running on an IC engine. Each member of the team represents themselves as an entry level engineer and gains extra 'out of the class' knowledge and hands on experience in the automotive field. This experience and dedication sets the students of this club to an elite status and gives them a competitive edge in the present growing world".

2. Team e-SJEC Racing

Team e-SJEC Racing, a new team which builds ATV powered by battery and motor. The team gained a huge success and successfully designed and fabricated first electric ATV at SJEC. Also they have participated in two national level competitions and did well in these competitions. The team details are given:

Sem/Branch	Student Names
7th/ME	**Aloysius Mathew D Silva (Team Captain)** , Yvon Francis Fernandes, Arul Rolan Ro-
7th/EC	Vikyath R, Vishakh Rai K
5th/ME	Rakesh Raj A M, Supreeth P. Amin, Neeraj Shetty, Uttham U, Desmond D'souza, Floyd
5th /EE	Srinidhi Adiga
3rd /ME	Clody Kevin D'Souza, Shibin Raj T K, Maganti Sai Praneeth
3rd /EE	Nihal Palaksha, Levin Lasrado, H Krishnan Embran, Maria Steffi Nazareth, Melroy An-

Achievements:

ATVC 2020 Gujarat: Participated in ATVC 2020 at Vadodara, Gujarat held on 15-19 February 2020. Acceleration: 5 Endurance: 7 Sledge Pull: 6 Overall All India Rank: 7
Total number of Teams: 20

Team Captain Message:

With a grateful heart to THE ALMIGHTY GOD, I introduce, with great pride, for the first time in the history of SJEC; an electric ATV club: TEAM eSJEC Racing.

FUTURE ENABLED

The driving force behind the conception and inspiration of the team lies in the above-mentioned moto and mission; enabling people and technology towards the future. Electric Vehicles is the future of automobile industry and already industrial giants such as Tesla, Tata, Mahindra are striving towards an electric future. SJEC foresaw this and gave its full support in bringing up this team.

"Coming together is a beginning. Keeping together is progress. Working together is success." *--Henry Ford*

It gives me great pleasure in showing the roadmap of Beetle 1.0.

May 2019 – Team eSJEC was formed

July 2019 – The team travelled to Punjab for its first Virtual Round where it cleared all rounds and was selected to participate in Pithampur.

January 2020 – Beetle 1.0 was unveiled by management in front of SJEC Chapel

January 2020 – The team participated in Pithampur, Indore and won AIR 44 and was found one of the lowest weighing with 194 kg.

February 2020 – The team participated in ATVC, Gujarat and won 5th in Acceleration, 6th in Sledge Pull, 7th in Endurance and AIR 7.

Aloysius Mathew D Silva
Captain- TEAM eSJEC Racing

We strived, we thrived and we succeeded. We are a team of 25 members, with members from ME, EEE and EC and of different batches. Yet, we studied, learnt, worked, laughed, played, ate and the next day worked together, like a family. Let's face it, we are not prepared for the outside world. But, being in a team like ours have given people the necessary practical application, knowledge and life experience, that has prepared us for our careers. It's a different world altogether, from our classes wherein we get our hands dirty proving whatever we have learnt in the classes.

3. Team ARTEMIS – GO-KART Team

A newly formed GO-Kart team named as TEAM ARTEMIS successfully designed and fabricated Go-Kart vehicle. They have participated in national level Go-Kart competitions.

The team details are given:

Sem/Branch	Student Names
7th/ME	**Pranam Athar (Team Captain),** Ashley Relston Monteiro, Reginald Saldanha
5th/ME	Alan Bread Ford D'Souza, Pratheek Lester D'Souza, Jason Brian Pinto, Mohamad Sahil Nazeer, Ruvita Jesmin Pinto
5th/EC	Nikitha K, Adlin Marceline Pinto, Carlton Hansen Lobo, Abhishek V S, Savanth S Bangera
3rd /ME	Clayton Tauro, Drupad N H
3rd /CS	Harshitha Nayak, Gurudeep Shetty
3rd /EC	Keerthana, Loshika V L
3rd /EE	Royston D'Souza

Achievements:

FIRST position in the Virtual International GO-KART Championship (ICG) Quiz.

SEVENTH rank in Virtual International GO-KART Championship (ICG) 2020 out of 40 teams.

Event was organized by Lovely Professional University, Punjab on 17 October 2020.

Team Captain's Message:

Pranam Athar
(Team Captain)
GO-KART Team

"It gives me a great pleasure to write this message and share my experience of being the captain of this amazing team. This was my first time managing a team and it was one of the best experiences that I had over the past few years. I was managing a group of people who had the same passion and desire towards building a Go-kart like me. Since this was the first Go-kart team from our college, I always thought that having no past experience was a huge disadvantage for us but later I realized that having no experience lets you explore beyond the boundaries and gain vast amount of knowledge and also experience things that you would have never experienced before. Being a part of this team allowed me to improve my technical skill, leadership, time management, and lots more. There were moments which slowed me down and made me loose hope but I gained my strength from my teammates to face all those difficulties. We saw a lot of ups and downs throughout this journey, but the thing that kept us going was the team spirit and thus we succeeded and achieved the end result".

4. Aero Teams

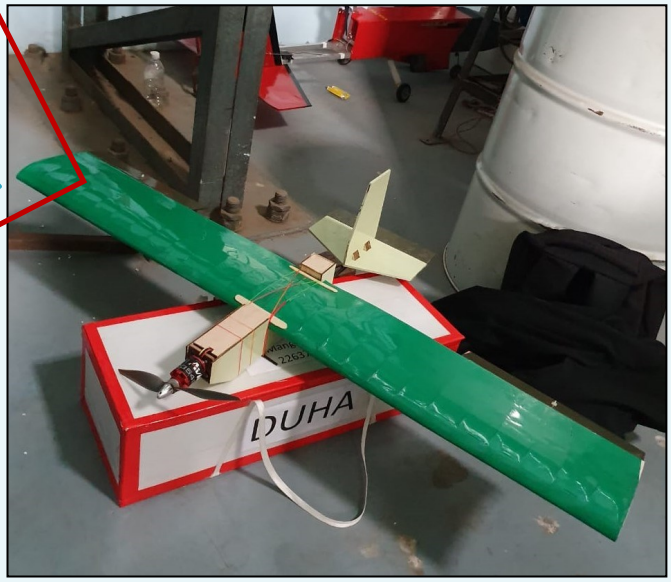
Aero Teams consists of 40 members who actively participate in aero related activities. Club consisted of two major aero teams during the academic year 2019-20 and teams have participated in national level competition. The teams are:

Team Name	Members
Team Graphene	**Varun Raj J (Team Captain),** Meldrin D'Souza, Vikas Divakara Shetty, Shashanka Shetty, Adarsh, Puneeth P, Sukumara Bhagavath
Team DUHA	**Chinmayee Prabhakar (Team Captain),** Shreya S, Mohith Mohan, Sushan S Rao, Athulya Suresh, Preemal Sharanya Serrao, Viyon D'Souza

Message/Achievements: "Each year, SAE southern section gives a platform to engineering students from all over India to showcase their passion for aircrafts through the SAE Aero Design Challenge. The event is created and administered by the Society of Automotive Engineers, in which groups of college level engineering students from all over India participate. There are two classes available for entry: regular and micro class. Team DUHA opted micro class. The objective of Micro Class is to design a light - weight UAV that can be quickly deployed from a small package. An aero workshop is held in SJEC college every year for the members of SAE AERO DESIGN CLUB of our institution. By recognizing individual capabilities, a selected few teamed together to compete in the SAE Aero Design competition. Within the team, based on each one's interest, team was divided into different departments to organize and divide the work accordingly. The aim of 'Team DUHA' was to design, construct, and fly a light weight, UAV for the 2019 SAE Aero Design Challenge. To remain competitive, the aircraft must carry as high payload fraction as possible and complete the given circuit. A remote-controlled aircraft was designed, constructed, and tested on the campus of St. Joseph engineering college, Mangaluru. Team worked towards the mission for a year, designing and testing different prototypes, at the college premises, during which it optimized the final aircraft designs and submitted the technical design report. The event was held at SRM Institute of Science and Technology, Chennai from July 19-21, 2019.We were able to secure an overall rank of 38 from all over India out of 51 teams in the micro class category".

Chinmayee Prabhakar
Team Captain - DUHA

TEAM DUHA


DUHA


SJEC RACING TEAMS
GREAT STORIES BEGIN HERE...!
TEAM ACHILLIUS
ELECTRIC SOLAR CAR
TEAM eSJEC RACING
ELECTRIC ALL TERRAIN VEHICLE
SJEC AERO TEAM
TEAM ARTEMIS RACING
GO-KART
TEAM SJEC RACING
ALL TERRAIN VEHICLE

ISIE INDIA Drive Your Dreams®
IMPERIAL SOCIETY OF INNOVATIVE ENGINEERS
National Youth Award Winner 2015-16, Ministry of Youth Affairs, GOI

IMPERIAL SOCIETY OF INNOVATIVE ENGINEERS (ISIE): ISIEINDIA is the most popular and favourite E-mobility Motorsports, Education and Research Publication organisation in India among engineering institutes and green energy research organisation. ISIEINDIA become the epicentre of green energy concept development in India. They are motivating people (Engineers + Future Engineers) to work on New and Renewable Sources of Energy. They give the platform to new start-ups, innovative ideas and to passionate people, who really want to contribute to society. They set out with an obsession for concept development, one that was unheard in the corridors of green energy development. It was about a commitment to creating value through innovation, quality, creativity, partnerships, openness, and learning. It has created a road which is leading the world to a new direction laid out by ISIE INDIA.
ISIEINDIA is the 1st society in India which is motivating engineering students to work on commercial green mobility. As an Observer Member, ISIE, a leading provider of green energy solutions, will take a keen interest in the activities of the Global Platform Advisory Council and the International Solar Federation. This group works to understand the business requirements of the Go-Green and Live Green Services Ecosystem and aims to ensure and create a workable environment.

ISIE INDIA SJEC Collegiate Club: Team ACHILLIUS

Team Advisor: Mr Yathish Kumar K, Asst. Professor , Mechanical Engineering, SJEC.
Team Captain: Mr Sohan Paul

Message:

"The exemplary performance of the team has lead to the creation of Raptor 1.0. The team had commenced on the dawn of September 2018, and consisted of 30 members with students from the Department of Mechanical, Electrical and Electronics, Electronics and Communication and Computer Science Engineering. The first ever Electric Solar Vehicle, originated from our college, has its own self fabricated solar panel and customized gearbox. The team completed their design and appeared in the Future Solar Design Championship from 13 to 16 March 2018 at Chitkara University, Punjab and ranked 11 all over India and 2 in Karnataka.
The team also participated in the Electric Solar Vehicle Championship, Asia's largest Solar vehicle event, from 12th-14th October 2018 clearing the pre-virtual at Chennai and ranked FIRST in Karnataka and 4th all over India. The team, then participated in the main event (ESVC) from 25 to 31 March 2019 at Chandigarh University, Punjab bringing in 3rd rank in Karnataka and 17th rank all over India.
The team continues to strive for evolution with their hard work and perseverance which led to the creation of the next generation vehicle Raptor 2.0 which is much more efficient compared to previous generation vehicle with overall battery range of 80Km per charge with a top speed of 60kmph featuring elegant design and a humble driver assistance system. The team has cleared pre-virtual event of Electric Solar Vehicle Championship on 19-20 October at Sri Nidhi Institute of Science and Technology, Hyderabad and achieved a rank of 6th all over India and Ist in Karnataka. And here we are, taking a step further to paint the legacy for generation of teams to come so that they also inspire to seek and aspire to build the future of transit".


Mr Sohan Paul
Team Captain

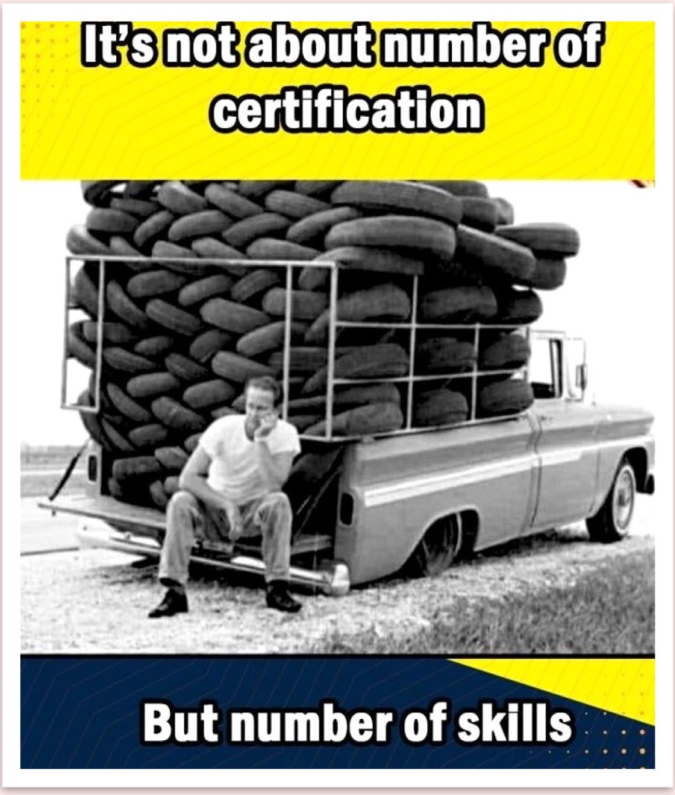
Achievements:

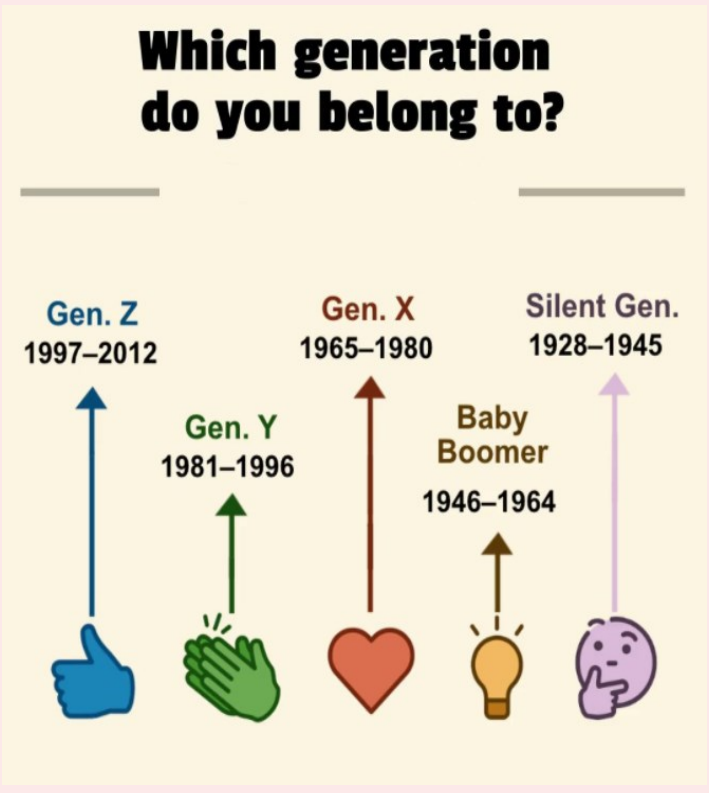
The next generation Solar Electric Vehicle Raptor 2.0 was unveiled just a week before unpredictable nation-wide lockdown which led to the competition being held virtually. Though it was unfortunate, the Team ACHILLIUS have taken it as a challenge and maintained their dedication towards excelling which is clearly evident in the results achieved.

All India Rank (AIR) 3 in ISIE-National Level Electric Solar Vehicle Championship Season 7, held on virtual platform 09-10 October 2020. Also achieved AIR 2 in the design round, AIR 3 in the autonomous round, AIR 3 in the business plan. The total number of teams in the virtual event was 49.

The details of team members are listed:

Sem/Branch	Student Names
5th/ EC	**Sohan Paul (Team Captain)**, Navya Ramachandra Nayak, Nikhil S Kumar, Sameeksha, Payal l Shet,
5th/ME	Dhanush Salian, Bhavish, Harshith Vineeth, Jaival Manohar Shetty, Alex Jose Alexander, A.Dhanush, Brinda S Shetty
5th /EE	Kiran Raj, Kaushik Malsekar, Lanwin Colaco
3rd/EC	Poorva Vinod Naik, Sahana P H,
3rd/ME	Dhivin P Giji, Hayyam Mohammed, Sheikh Muizz Ahmed, Thrishul Krishna, Akhtar Ahsan Sayeed,
1st/ME	Ajay Kumar M, Keerthan Bhandary, Shreyas Acharya, Pramith D Kumar
1st/CS	Pravin Kumar
1st/EE	Sandeep Sagar Shaji





ARC SJEC

ARC-SJEC INAUGURATION

06 September 2019

The inauguration of activities of the ARC-SJEC Club was held on 6 September 2019. The chief guest for the inauguration was Mr. Vion Joseph Martis, Director - VTRIA Engineering solutions. Rev. Fr Rohit D'Costa, Asst. Director-SJEC and Dr. Rio Dsouza, Principal-SJEC were the guests of honor. Rev. Fr. Wilfred Prakash Dsouza, Director - SJEC, presided over the function. The Inauguration witnessed the presentation of the annual report and the induction of the office bearers for the academic year 2019-2020. Mr. Karthik and Mr. Yamen Akhtar, outgoing members of the Club delivered a presentation on VTOL and Drone models. Mr. Vion Joseph Martis, who was the Founder Director of the Club in 2016, in his address spoke about his experiences with the club and the benefits from it. The inauguration

Message by President:

"ARC-SJEC is a platform for students to work on their ideas related to Automation and Robotics. My interest in ARC-SJEC was driven by a project related to Li-Fi, where we were able to transfer data through Light. Along with Li-Fi, the Club is also funding my project on design and fabrication of a functional model of Unmanned Aircraft. The work is currently ongoing. Being the President of the Club, it is an opportunity for me to hone my leadership skills and experience the challenges of leading projects to its completion".

Grenvil Noronha
V Semester M1

ARC-SJEC @ BMSCE Bengaluru

24 September 2019

Team Kaizen of ARC-SJEC Participated in TECHFEST conducted by BMS Bangalore on 24 September 2019, which was the zonal for Ideate - The Tech Fest of IIT Bombay. Team Kaizen qualified for two events: Maze Solver and Robo Clench.

PREPARATION OF BOTS

Team Kaizen of ARC-SJEC led by Mr Anish, Joint Secretary of ARC-SJEC has developed the following bots for the Club to participate in various Tech Fests in the year 2019-2020.

Controlling Bots:

RC Bots

Robo Clench (Pick and drop bot),

Robo Sumo

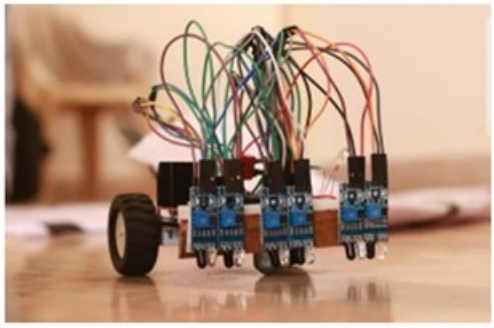
Robo Soccer, Drone

Non-controlling or Automation Bots:

Line Follower

Light Follower

Maze Solver.



Line follower

RC racing bot

Perfect machine
(pick and drop bot)

Robo soccer

Perfect machine

Rc racing

Light follower

PARTICIPATION IN E-YANTRA

The ARC Club has debuted four Faculty coordinators to e-Yantra – a project in the Department of Computer Science and Engineering (CSE), IIT Bombay - is a flagship project of MHRD through the National Mission on Education through ICT (NMEICT) to spread Embedded systems and Robotics education in colleges across India. The faculty who attended are: Ms Lavina D'Silva - CSE, Mr Rohan Salian - CSE, Mr Vijay Ganesh - ECE, and Mr Rahul Kumar – ME. The team is currently in the Task-Based Training stage.

Message from Faculty Coordinator:

"The Automation and Robotics Club of SJEC has entered its fifth year of operation. The club was launched as an initiative to encourage and support student projects on Automation and Robotics. Driven by the Department of Mechanical Engineering and supported by Faculty coordinators from all Departments of the College, the Club recruits members from all disciplines through a selection process. While big plans were afoot for 2019-2020, the COVID pandemic has restricted the activities of the Club to a certain extent. The inauguration of activities for the academic year 2019-2020 was held on 6 September 2019. Mr. Vion Joseph Martis, VTRIA Engineering Solutions Pvt Ltd and an alumnus of SJEC from the Class of 2017, was the Chief Guest for the inaugural. It was quite satisfying to see Vion, who was the Founder President of the Club in 2016, return as Chief Guest for an event of ARC which he himself had nurtured.

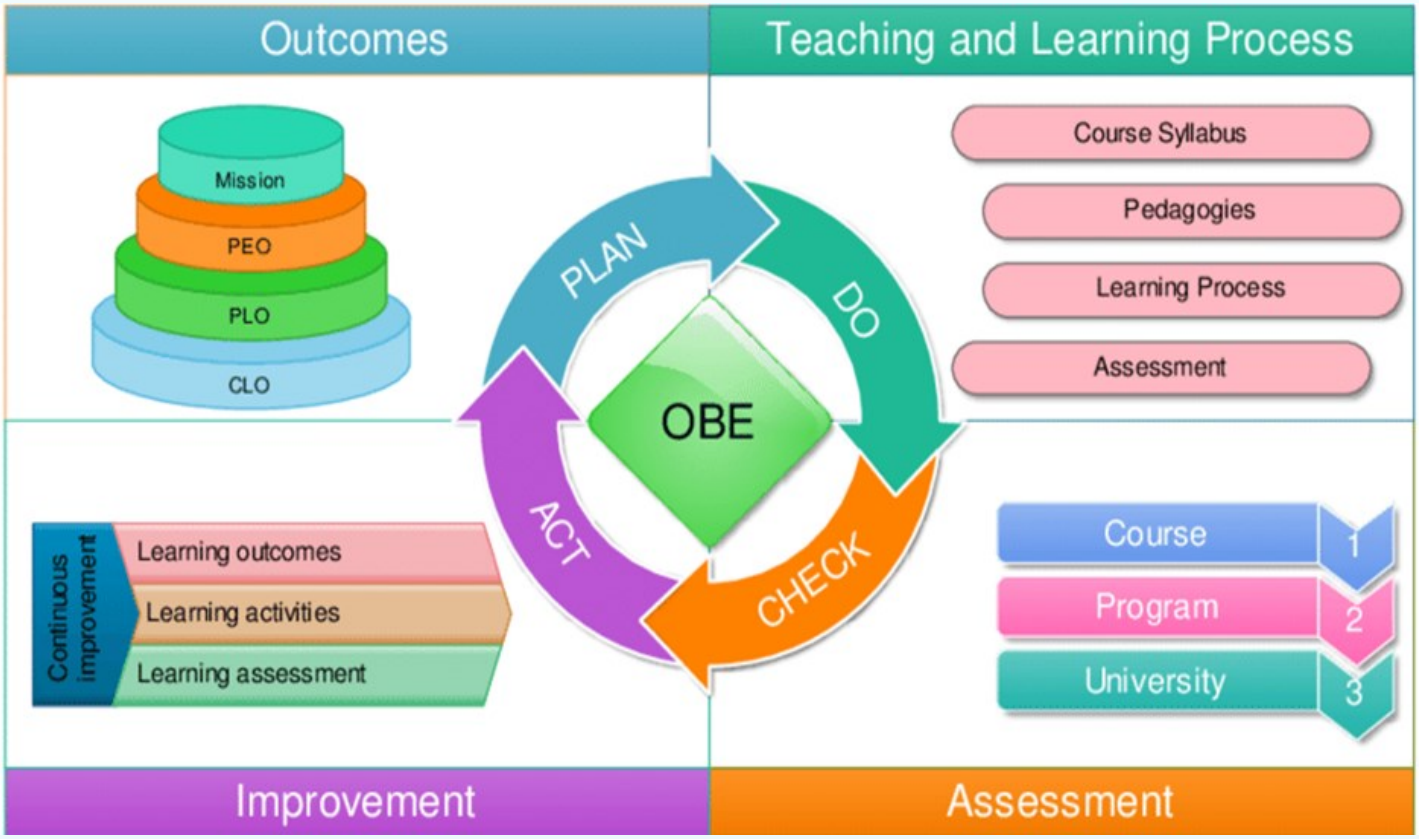
Dr Binu K G
Associate Professor-ME

In keeping with the tradition, the members of ARC SJEC participated in various Technical Events across the region and won many laurels for the College. Team KAIZEN of ARC SJEC had also qualified for the Tech Fest of IIT Bombay, but unfortunately due to clash of dates with VTU exams, limited their participation. With the Tinkering and Exploration Lab coming into force, first-year students see ARC SJEC as the next step entering into the second year. The Club looks forward to scale up the activities of the Club with its involvement in social innovations. Currently, a team of ARC Members led by Mr Vijay Ganesh, Faculty Coordinator from ECE, is working on the design and development of a BOT that will operate in the Administrative Block in assisting visitors with the admission process. The Club also aims to set-up an Automation lab in association with eYantra the flagship program of MHRD. Four of our Faculty Coordinators led by Mr. Vijay Ganesh are working on the proposal.

As we wait for the pandemic to recede and for students to come back to the Campus, the Club will continue to engage students through webinars and other activities to keep the learning going on".

….. Benefits of joining Student Association and Clubs

Outcome Based Education (OBE) Practices



Department of Mechanical Engineering has always made its best efforts in implementing OBE aspects as required by NBA. We are proud to inform that Department of Mechanical Engineering has been reaccredited for from June 2019 to June 2022. This has been possible due to the excellent support we received from each and every staff member during the accreditation process. Efforts are also in progress to implement the new Teaching Learning Practices and adopt the best possible pedagogies suitable for engineering education. Active involvement of our faculty in Engineering Education Certification program from IUCEE, Engineering Education Research and Internal Training from IQAC are ensuring that Department of Mechanical Engineering is progressing in right direction in achieving full accreditation status from NBA in coming years.

		
Mr Sharun Mendonca	**Mr Ravikantha Prabhu**	**Mr Poornesh M**
NBA Program Coordinators		

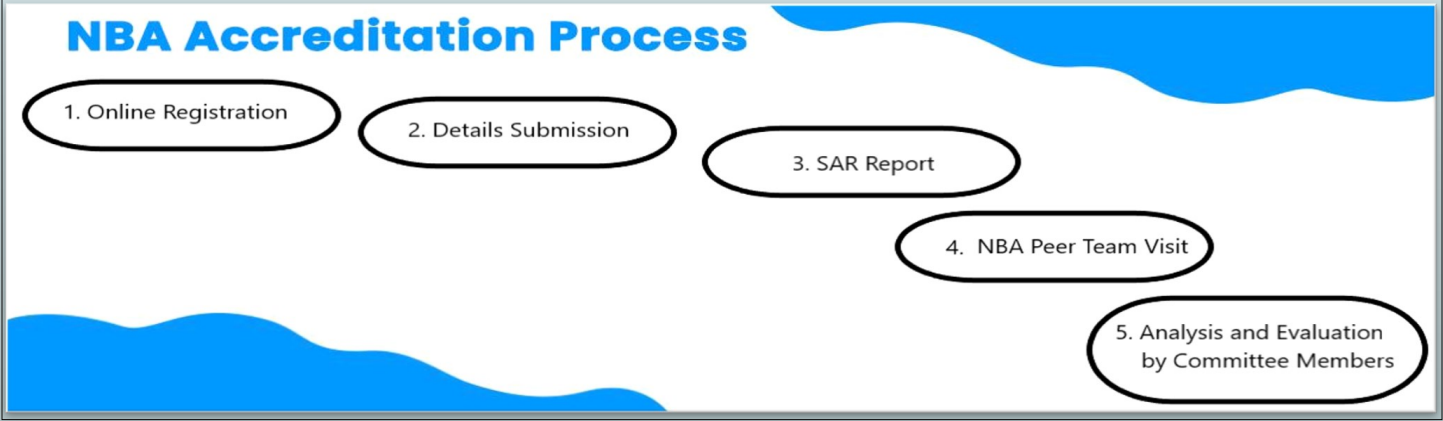
THE PROGRAM ASSESSMENT COMMITTEE (PAC) MEETING

The Programme Assessment Committee (PAC) meeting for the year 2018-19 was held on 15th October 2019 at 11:30 AM in the HOD Chamber, Mechanical Engineering - SJEC.

Sl. No	Name	Designation	Role
1	Dr Sudheer M	Professor & Head	Criteria Head
2	Dr Raju K	Professor	Criteria Head
3	Dr.Shreeranga Bhat	Professor	Chief Accreditation Coordinator
4	Dr Suma Bhat	Associate Professor	Senior Faculty
5	Dr James Valder	Associate Professor	Criteria Head
6	Dr.Binu KG	Associate Professor	Criteria Head
7	Dr Jayavardhana M L	Associate Professor	Senior Faculty
8	Mr. Rudolf D'Souza	Assistant Professor	Workshop Superintendent
9	Mr. Vijay V S	Assistant Professor	Program Coordinator (2016-19)
10	Mr.Rolvin S D'Silva	Assistant Professor	Program Coordinator (2016-19)
11	Mr Sharun Mendonca	Assistant Professor	Program Coordinator (2019 onwards)
12	Mr.Ravikanth Prabhu	Assistant Professor	Program Coordinator (2019 onwards), Virtual Lab coordinator
13	Mr Poornesh M	Assistant Professor	Criteria head and First year Program Coordinator
14	Mr.Pavana Kumar B	Assistant Professor	Internship Coordinator
15	Mr Sushanth H G	Assistant Professor	Project coordinator
16	Mr Chiranth B P	Assistant Professor	IIC Coordinator
17	Mr Vinoothan K	Assistant Professor	Alumni Coordinator
18	Ms Prameela D'Souza	Assistant Professor	First Year Faculty
19	Mr Akash Lobo	Final year	Student Representative
20	Mr Kevin	Final year	Student Representative

Outcomes:

Review of Minutes of previous PAC/DAB Meetings.
Attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs) in the program.
Review of the CO and PO assessments
Suggestion for PEO modification, More awareness on challenges faced during placement and higher studies, GATE exam preparation etc.



THE DEPARTMENT ADVISORY BOARD MEETING

The Department Advisory Board (DAB) meeting for the year 2018-19 was held on 26th October 2019 at 10:00 AM in the Board room.

Members Present:

Sl. No.	Name	Category
1	Dr Sudheer M	Chairperson
2	Rev. Fr. RohithDcosta	Management Representative
3	Dr Rio DSouza	Management Representative
4	Mr Vijay V S	Programme Coordinator (2016-19)
5	Mr Rolvin S D'Silva	Programme Coordinator (2016-19)
6	Dr Raju K	Senior Faculty
7	Dr Suma Bhat	Senior Faculty
8	Dr Purushottham chippar	Senior Faculty
9	Dr James Valder	Senior Faculty
10	Mr Sharun Mendonca	Programme Coordinator (2019 -20)
11	Mr Ravikanth Prabhu	Programme Coordinator (2019 -20)
12	Mr Prashanth Kumar	Senior Faculty
13	Mr Rudolf D'Souza	Workshop Superintendent
14	Mr Vinoothan K	Alumni Coordinator
15	Dr Vincent Crasta	HOD - Physics
16	Mr Canute Sherwin	Project coordinator
17	Mr Nishwinpal	Industrial Representative (KGTTI, Mangalore)
18	Ms Preethi Vittal	Industrial Representative (V& G Industries, Mangalore)
19	Mr Carlton Sequeira	Employer Representative
20	Mr Ian D'Souza	Alumni Representative
21	Mr Arjun P M	Alumni Representative
22	Mrs Jayashree	Parent Representative
23	Mrs Jacintha Pinto	Parent Representative
24	Mr Dhiwin P Giji	Student Representative
25	Mr Ravish M	Student Representative
26	Mr Raison D'Souza	Student Representative

Outcomes:

Review of Minutes of previous DAB/PAC Meetings.
Attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs) in the program.
Review of the CO and PO assessments.
Suggestion for PEO modification, internship using Expert Hub, awareness on using MATLAB and Python programming, participation in collegiate club SAE, ARC and ISIE clubs activities.

NBA Accreditation Benefits and Significance

- Validates the quality standards
- Fosters the trust in the institution
- Improves student performance
- Helps in SWOT analysis and bettering the outcomes
- Provides the basis for fund-raising
- Edge in the job market
- Better mobility going forward

NAAC COORDINATORS

		
Mr Swaraj Lewis Academic Year 2019-20	Dr James Valder Odd Sem 2019-20	Mr Vijay V S Even Sem 2019-20

The National Assessment and Accreditation Council (NAAC) is an organization that assesses and accredits higher education institutions (HEIs) in India. National Assessment and Accreditation Council (NAAC) was established in 1994 as an autonomous institution of the University Grants Commission (UGC) with its Head Quarter in Bengaluru.

It is the institute's responsibility to opt for the NAAC assessment. The grade of an institution denotes the standard of quality as set by the accreditation agency. NAAC accreditation is a continuous process.

Benefits of NAAC Accreditation:

Institution to know its strengths, weaknesses, and opportunities through an informed review process
Identification of internal areas of planning and resource allocation
Collegiality on the campus
Funding agencies look for objective data for performance funding
Institutions to initiate innovative and modern methods of pedagogy
New sense of direction and identity for institutions
The society look for reliable information on quality education offered
Employers look for reliable information on the quality of education offered to the prospective recruits
Intra and inter-institutional interactions

Institutions are graded for each Key Aspect under four categories, viz. A++, A+, A, B++, B+, B, C and D, denoting Very good, Good, Satisfactory and Unsatisfactory levels, respectively.

Progress towards NAAC in Department of Mechanical Engineering at SJEC:

The NAAC work in the Department of Mechanical Engineering has been initiated and three coordinators Mr. Swaraj Dominic Lewis, Dr. James Valder and Mr. Vijay V S are nominated to handle the NAAC related works for the academic year 2019-20.

Documentation work related to online submission and offline visit have been done. Current updates are in progress. Separate documents have been prepared for display during the NAAC visit to access the department.

Recently an internal mock visit was conducted on August 12, 2020 to assess the progress of work and to get a valuable suggestion from the experts. These suggestions are being incorporated in the documents which will be displayed to the NAAC expert during the final visit.

The Department of Mechanical Engineering is confident of getting A+ grade in the NAAC Evaluation process.

Core Values of NAAC

*** Contributing to national development * Fostering global competence among the students**
*** Inculcating value system in students * Promoting the use of the technology**
*** Quest for excellence**

AUTONOMY COORDINATORS

	
Mr Sharun Mendonca Academic Year 2019-20	Mr Chiranth B P Academic Year 2019-20

Autonomy is defined as a functional status given to the Institute, by the University Grants Commission (UGC) by providing greater flexibility towards purely academic development for improvement of academic standards and excellence.

a) At present Government/ University provides only Academic Autonomy.

b) Administration/ Financial norms shall remain as per existing University system.

c) The Service conditions of faculty shall remain same as per existing University/ UGC rules.

An autonomous Institute will have the freedom to:

Determine and prescribe its own courses of study and syllabi, and restructure and redesign the courses to suit local needs. This will cover all courses at UG, PG, etc. at the time of conferment and new courses subsequently,

Offer student-centric wide choice in courses, wide range of electives and freedom in choice of courses,

Periodical change in syllabus as per changing needs,

Prescribe rules for admission in consonance with the reservation policy of the state government,

Evolve methods of assessment of student's performance, the conduct of examinations and notification of results,

Use modern tools of educational technology to achieve higher standards and greater creativity, i.e. to frame their curricula, devise methods of teaching, examination and evaluation. But Autonomy is always linked with accountability. Academic audit, both internally and externally, will be continued to monitor standard of education at any point of time, and

Promote healthy practices such as community service, extension activities, projects for the benefit of the society at large, neighborhood programmes, etc.

Autonomy Benefits:

Framing syllabi for each program/course, Conducting teaching-learning at all levels, Evaluating students' academic performance, Declaring results of degree/diploma students, Recommending degree awardees lists to VTU, Conferring provisional degrees and diplomas, Better quality teaching-learning made possible, Facility for improving examinations system, Frequent launching- new, innovative courses, Better quality and standard of programmes, Students continuing to get university degrees, Capacity to play major role in university work, Decentralized administration, management and financial functions, Free to have their authorities: Governing Body, Academic Council, Finance Committee, Boards of Studies and other, Better experience in all academic functions, Better capability to attract sponsored R&D projects and consultancy, Higher level of interaction with industry and employers, Gaining better confidence/respect of students, Taking up knowledge/skills development, Increased potential for career progression etc.

Progress towards Autonomous in Department of Mechanical Engineering at SJEC:

The Autonomous work in the Department of Mechanical Engineering has been initiated and coordinator Mr. Sharun Mendonca along with Mr Chiranth B P were nominated to handle the Autonomous related works for the academic year 2019-20.

Documentation work related to offline visit has been under progress. Separate documents have been prepared for display during the autonomous visit to assess the Department. The draft academic plan, scheme and syllabus for 1-8th semester are formed. For syllabus forming subjects are assigned to faculty based on their expertise. The curricular components consist of Basic Sciences Courses (BSC), Engineering Sciences Courses (ESC), Professional Core Courses (PCC), Professional Elective Courses (PEC), Humanities, Social Sciences and Management Courses (HSMC), Open Elective Courses (OEC), Skill Development Courses (SDC), Mini Project, Major Project, Internship, Seminar and Non Credit Mandatory Courses (NCMC).

Recently an internal mock visit was conducted on August 12, 2020 to assess the progress of work and to get a valuable suggestion from the experts. These suggestions are being incorporated in the documents which will be displayed to the Autonomous expert during the final visit.

The Department of Mechanical Engineering is confident of getting Autonomous status in the Autonomous Evaluation process which will be done by UGC Expert Committee for Granting Fresh Autonomous Status.

Learning using flipped classroom method

In flipped classrooms, also known as inverted classrooms, students review lecture materials before class as homework. In-class time is dedicated to discussions, interactive exercises, and independent work that would have previously been completed at home — all under the guidance of the teacher, who is present and available to respond to any questions that may arise. I have used this concept to teach one of the topics in Turbomachines subject of 5th semester class. Following are the steps of implementation.

Step 1: Selection of topic

In flipped classroom model, students spend time in studying the topic outside the classroom. Topics can be shared either in the form of recorded video lectures or reading materials. It should be taken care that these topics are not too complex or too abstract to study for themselves. In my subject, Turbomachines, I choose topic "***Maximum blade efficiency and Compounding of steam turbines"*** which was self-explanatory and easy to understand.

Step 2: Sharing of Content.

Students should be given sufficient time to read the topic before attending the class for discussion on the same. I posted the reading material on google classroom (refer Fig 1) one week before the scheduled class for discussion on that topic. This helps them to self pace their learning and understand the concept better.

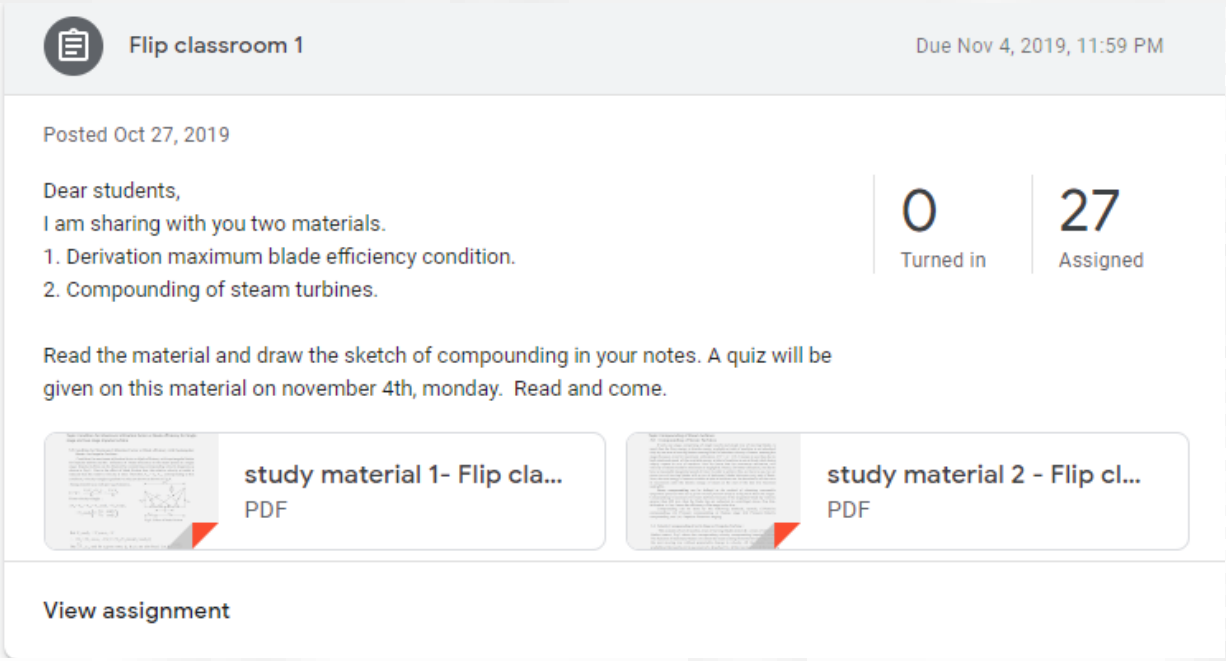


Fig 1: Sharing of content in google classroom

Step 3: Discussion of the topic in the classroom

During the class time, the topic was presented to the students. Since they already studied the topic, class time was utilized only for doubt clarification. It took very less time about 15-20 minutes. In a traditional classroom method, the same topic took 1.5 to 2 hours to teach. This is the advantage of Flipped classroom method.

Step 4: Assessment of learning

It is very important to measure the learning of the topic by students because it was shared with them for self-study purpose. Quiz is the easy way to do it. After clarifying doubts in the class, students were allowed to take a quiz. It consisted of 10 questions. I used the google form to conduct quiz. Figure 2 shows the results of the test. Average score of 42 students was 8.26 out of 10. It proves that the students learnt the topic better.

My reflection of using Flipped classroom teaching method

1. Promotes independent study: In flipped classroom method, reading of theory and concepts was shifted outside the classroom. It gives sufficient time for students to read and self-pace their learning which is of great help to slow learners.

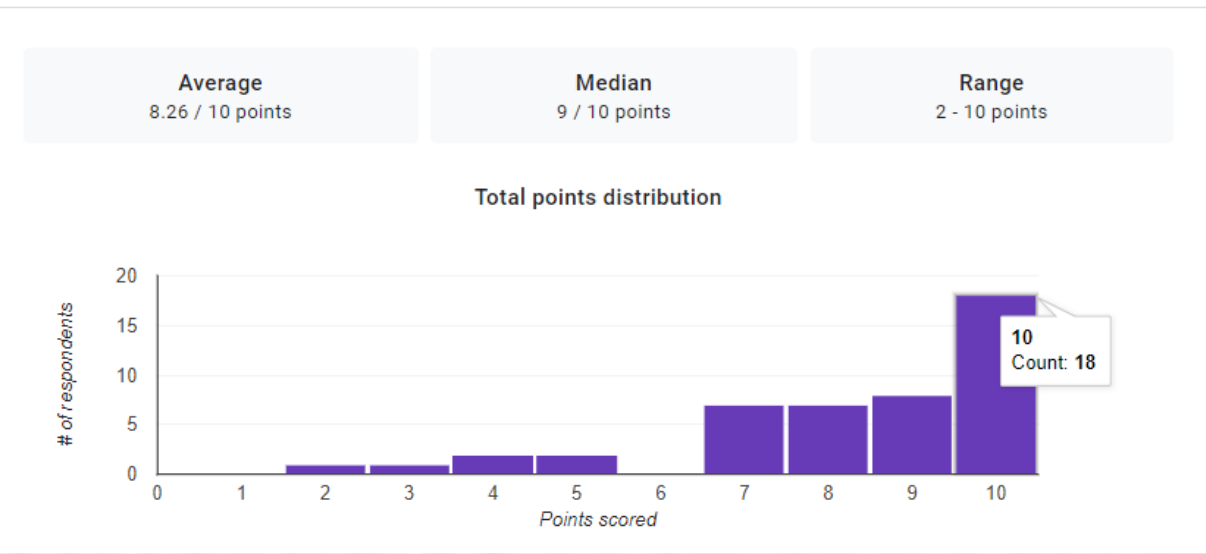


Fig 2: Results of quiz

2. Effective use of Learning Management System: Sharing of contents are easy to do in Learning Management System like google classroom or canvas. It helps in effective use of this system for sharing content and allowing students to clarify doubts using tools like discussion forum.

3. Productive use of class time: Since the theory and derivations are learnt beyond class hours, actual class timings are used for solving more problems or conducting group discussion on case studies etc. This improves the learning of the topic and helps in improving results.

4. Precautions: Care should be taken while selecting the topic for flipped classroom method. It should not be too easy or difficult to learn. Second most important point to remember is the assessment. Always end the flipped classroom technique with either quiz or feedback or simple assignment which helps the teacher to know the learning among students.

Mr Vijay V S
Assistant Professor

FIELD STUDY ON ENGINE EMISSIONS

An activity called as Field Study on Engine Emissions a part of the assignment was conducted for IV sem students in Applied Thermodynamics Subject:

All the students of the class were divided into groups based on their marks scored in the first internal test.
All were divided into groups of 11 members each.
Each group was assigned with a particular type of vehicle like Scooter, Bike, Car, Bus, Lorry, Auto rickshaw etc.
As a team they would discuss, decide and distribute the work among themselves.
At the end of completion of the assignment they submit the report in hard copy as well as soft copy (to be uploaded in Google classroom) and have to give presentation in the class.

As a part of the Assignment the students had to visit any nearby Emission Testing Centre and conduct an interview with the Operator and note the following:

Ms. Ramya M
Assistant Professor

They shall video record the interview (ranging from 3 to 5 minutes) and in the interview they had to ask the Operator the brief procedure for emission testing, how the equipment works and what emissions are usually recorded, what are the units of measurement, what are the ranges of safe working etc…they could also include any other relevant questions of their choice.
Identify vehicle of any brand of particular make that is assigned to the group (like Honda active, Scooty pep etc) but of different year of manufacture say 2018 model, 2017 model, (Recent ten years) etc, and collect sample data of the emission test for any 5 years along with present emission certificate.
Tabulate the data with table and graphs.
Identify methods to control emissions.
Analyze reasons for emissions and present in a ppt of not more than 10 slides.
Interview with video recording could be included in the ppt.

Prepare a report which includes front page with college name and logo, group members name and USN, Acknowledgement, index, introduction, methodology, results and discussions, conclusion, references, attach proofs.

The outcome of this field study was very convincing with the demonstration of self-directed learning, collaboration and critical thinking by the students. Moreover, this exercise motivated students to take-up more real-life challenges. Interestingly, many students have shown interest to learn more about the engine emissions and its control.

Click on image to see entire sample VIR report

ASM Emission Test Results

		%CO_2	%O_2	HC (PPM)			CO (%)			NO (PPM)			
Test	RPM	MEAS	MEAS	MAX	AVE	MEAS	MAX	AVE	MEAS	MAX	AVE	MEAS	Results
15 mph	2920	15	12.4	77	60	21	0.5	0.3	0.04	762	600	477	PASS
25 mph	2242	15	12.4	75	60	17	0.49	0.35	0.03	715	590	346	PASS

MAX = Maximum Allowable Emissions AVE = Average Emissions For Passing Vehicles MEAS = Amount measured

Figure. Sample photos and report.

PROJECT BASED LEARNING

Subject: Mechatronics (15ME753), VII Sem Mechanical Engineering

Project based learning is a teaching method in which students gain knowledge and skills by working in team outside the classroom hours to investigate and respond to an authentic, engaging and complex question or problem or challenge. Students are expected to come up with a product or a solution or a working model based on the theoretical principles and concepts taught to them in their classroom.

As a part of Project Based Learning initiative in the Mechatronics course we conducted a mini project competition for 7th Semester Students in the month of October, 2019 to provide students with the opportunity to showcase their talent and technology orientation towards automated systems. Students were informed to develop a working model on a "Mechatronic System" by using any Sensor or Transducer. This was a group activity and students were given sufficient time to come up with a concept and develop their working model. Students showed great zeal and enthusiasm in developing their model.

An exhibition was conducted class wise after the students developed their models. Students presented their models with a brief explanation and demonstrated the working. Staff member in charge of the exhibition asked questions to students based on the project and there was a constructive discussion between the students. This activity helped students to gain practical exposure into the theoretical concepts of Sensors, Types of Sensors, Applications of Sensors, Transducers, Types of Transducers and Applications. Many IOT based and Arduino based projects were displayed for different applications.

Some of the mini projects designed and developed by students include Joystick Controlled Industrial Automation System, Smart GPS Tracker, Flash 4 LEDs in different sequences, Arduino Based Wireless Frequency Meter, Noise Detector using Arduino and IOT, Arduino based Audiometer, Automatic Light Controller, Fingerprint Sensor, Automatic Plant Watering System, Radar Concept and Line Following Bot etc.

Through this mini project exhibition we were able to engage students to work on a project for 4 to 5 weeks and get solutions to real world problems. They were successful in demonstrating their knowledge and skills by creating a public product or model for real products.

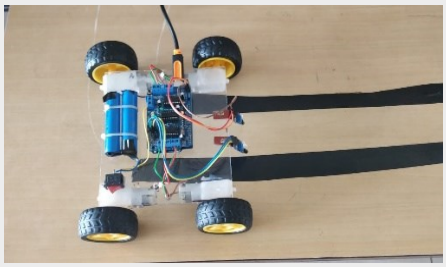


Photo: Line Following Bots

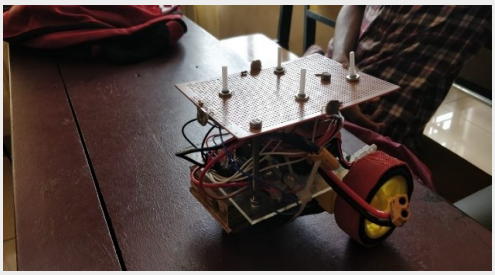


Photo: Smart GPS Tracker

Mr Canute Sherwin
Assistant Professor

Mr Ragavendra Prasad
Assistant Professor

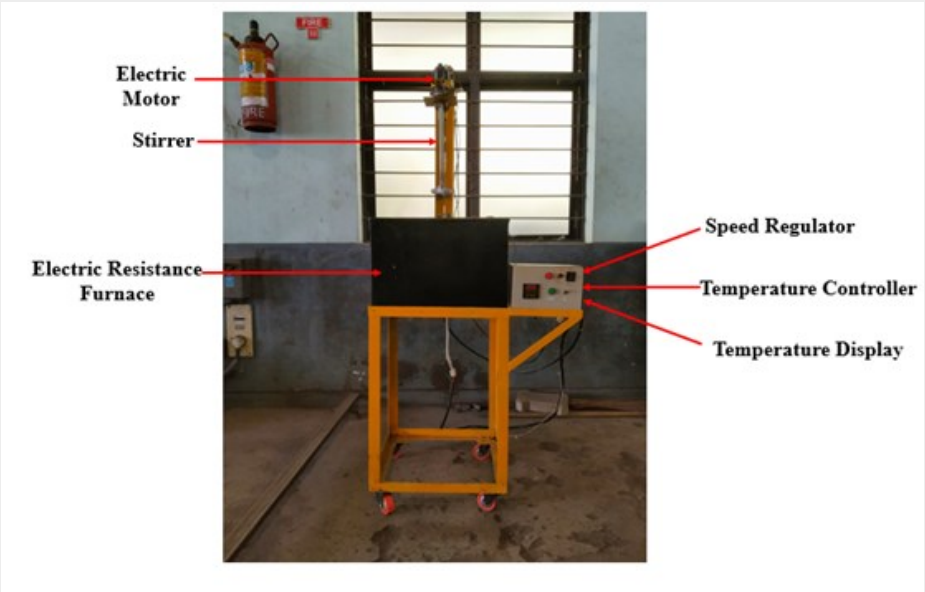
Photo: Students Demonstrating the working model

STIR CASTING SETUP DEVELOPED THROUGH FINAL YEAR PROJECT

Stir Casting is a liquid state method of composite materials fabrication, in which a dispersed phase (ceramic particles, short fibers) is mixed with a molten matrix metal by means of mechanical stirring. In stir casting we use stirrer to agitate the molten metal matrix. The stirrer is generally made up of a material which can withstand at a higher melting temperature than the matrix temperature. Generally, graphite stirrer is used in stir casting. The stirrer is consisting of mainly two components cylindrical rod and impeller. The one end of rod is connected to impeller and other end is connected to shaft of the motor. The stirrer is generally held in vertical position and is rotated by a motor at various speeds. The resultant molten metal is then poured in die for casting. Stir casting is suitable for manufacturing composites with up to 30% volume fractions of reinforcement.

As a part of the final year academic project, students of 8th semester, Mr Swebert Ralph Dsouza, Mr Shravan S Suvarna, Mr Yathiraj and Mr Keerthi Prasad R Shetty have designed and fabricated a Stir Casting Machine. The setup consists of an electrical resistance furnace used to melt the molten metal and K-type semiconductor to measure the temperature inside the furnace. A temperature of 1500°C can be obtained using the furnace. The stirrer is designed in a way to resemble the impeller blade for optimum stirring and mixing of the reinforcement with the matrix and has a stirring speed in the range of 400-800 rpm.

The stir casting setup meets the research requirements and can be utilized to conduct research on metal matrix composites by faculty and students.



Mr Poornesh M
Assistant Professor

PROJECT BASED LEARNING: CIM Lab Mini Project 2019-20

CIM Lab MINI PROJECT 2019-20 was carried out for all the students studying in the 7th Semester of Mechanical Engineering from 13 November 2019 to 20 November 2019. The Faculty handling the respective CIM lab batches had sent their CIM lab batch students to Hebich Technical Training Institute (HTTI), Balmatta, Mangaluru for CNC lathe machining as part of the MINI PROJECT for the internal assessment for 5 marks according to the syllabus of CIM lab to meet the guidelines given by the University. To facilitate mini project at HTTI, Balmatta, Mangaluru all the four sections of 7th Semester students were divided into 22 groups with each group consisting of up to 7 to 8 students.

The student groups had to develop a CAD Model of the lathe component using CAD Software Solid Edge ST7 and then Simulate the developed **CNC program** for their developed Part Model using the **seeNC Turn Software** available in the SJEC MECH CIM lab. After simulating and checking for the correctness of the CNC program, the student groups had to perform the machining operations on the part using CNC Lathe machine at Hebich Technical Training Institute (HTTI), Balmatta, Mangaluru. After the completion of the Mini Project the Student groups were supposed to submit the machined component made of Aluminum material along with the Mini Project Report per Group to the CIM lab for assessment by the respective lab faculty. The Mini Project was very well accepted and widely appreciated by all the students who were involved in the mini project as it gave them Industrial exposure and practical insights into the machining of the parts using the CNC Lathe machine, and also gave them an opportunity to visit and interact with the people involved in the shop floor of the industry and mainly have a hands-on experience with the operation of the CNC Lathe machine through this Mini project.

CIM Lab In-charge:- Mr Noel Shiri

List of Faculty handling the CIM Lab (2019 - 2020):-
Mr Noel Shiri, Mr Ravikantha Prabhu, Dr Jayavardhana M.L, Mr Swaraj Lewis, Mr Alister D'Souza, Mr Raghavendra Prasad, Mr Jinu Mathew, Mr Santhosh H, Mr Canute Sherwin and Mr Akshay NH.

CIM Lab Instructor: - Mr Harshith K

PRACTICING SOLID EDGE SKILLS WITH THE MOTORCYCLE PROJECT

Name of the software used: Solid Edge ST6

Steps Involved:

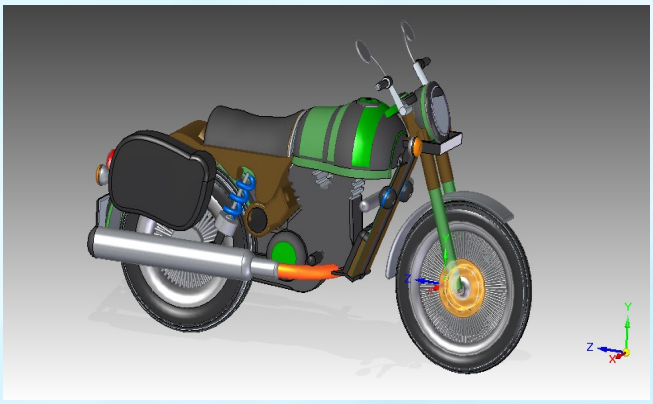
1.Creating the individual parts

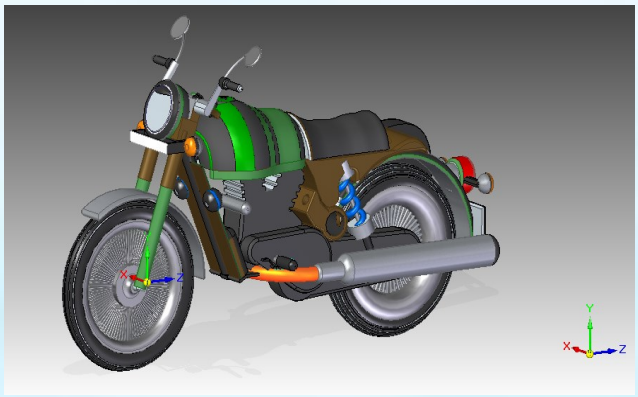
2.Assembling the parts

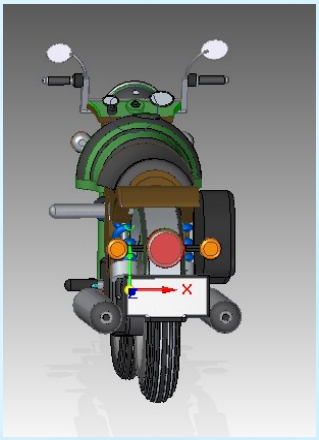
3.Checking the model

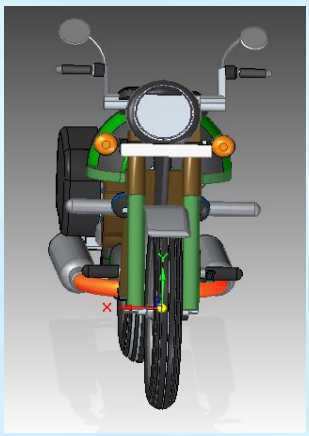
4.Genrating the drawing

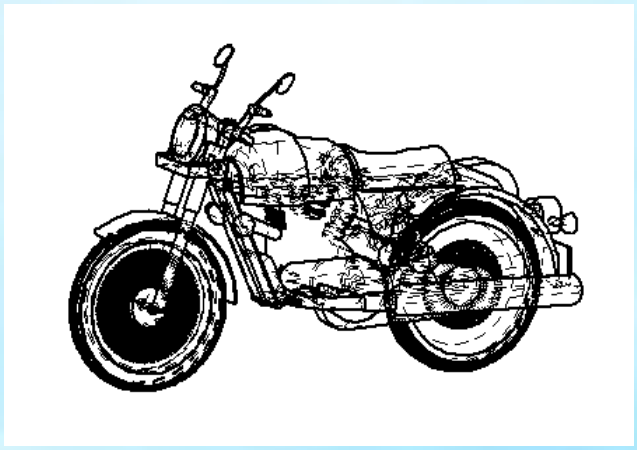
Mr. Immanuel Jayakar Ammanna
Lab Assistant

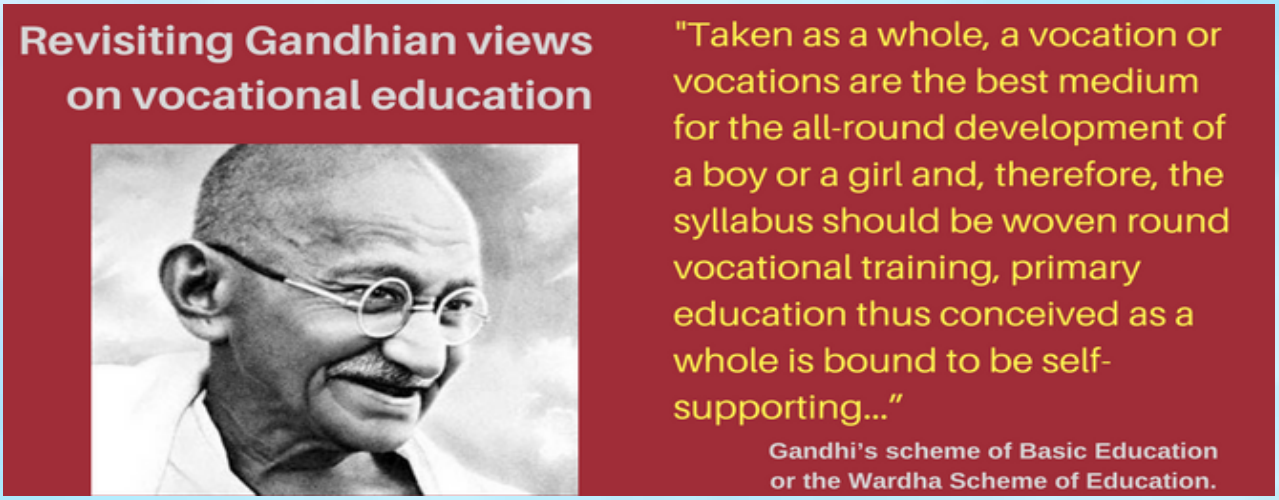












Industry Institute Interaction Cell

The Department of Mechanical Engineering has a set up a committee to organize and arrange various activities to strengthen the Institute-Industry relationship and to expose our students to organizational, functional and technical aspects of the industry. Industry – Academia partnership is vital in promoting employability readiness of graduate engineers.

Vision Statement of IIC:

"We will strive to excel as the best Industry Interaction Cell in the academic system of this region by promoting constant interaction and co-operation between Academia and Industry".

Mission Statement of IIC:

Work towards strengthening the Department's relationship with industry through constant interaction and develop a mutually beneficial partnership.

Objectives of the Cell:

Promote faculty and students' interaction with industry personnel.
Offer a platform for SJEC (Mechanical Engineering) - alumni from Industry to interact with current students and faculty.
Organize invited lectures of Industry Personnel on key specializations to address curriculum gaps (course objectives).
Organize industrial visits for students.

Faculty Coordinators		Student Coordinators
		Vikas Shetty Varun Kumar
Mr Chiranth BP	Mr Santhosh H	

Industry institute interaction cell of Mechanical Engineering department has conducted a total of six activities (Technical talk and industrial visit) for the academic year of 2019-20. The details of the activities are presented.

Sl	Industrial Visit/Talk	Date/Time	No of students
1.	Varahi Hydro power plant and Mani dam	05/11/2019 and 17/09/2019 :6.30am - 7.30 pm	50 + 48
2.	GWASF, Baikmapady	17/10/2019 - 22/10/2019: 10.00 am - 1.00 pm	150
3.	NMPT, Mangaluru	25/10/2019: 10.00 am - 12.30 pm	53
4.	MRPL, Mangaluru	11/11/2019: 10.00 am - 1.00 pm	25
5.	IMTMA interactive meet	30/01/2020: 10.00 am – 1.00 pm	24
6.	KIOCL, Panambur	29/02/2020: 10.00 am - 1.00 pm	25

1. Varahi Hydro Power Plant and Mani Dam: Industrial Visit

One day industrial visit for Pre final year students to "Varahi Hydro Power Plant, Hosaangadi and Mani Dam, Yadur was organized". Total of 49+49 students along with five staff took part in the visit. Visit was scheduled on two slots, First visit was on 17/09/2019 and second visit was on 05/10/2019. Mr. Chiranth B.P , Mr Santhosh, Mr Vijay V.S, Mr Sushanth and Mr Prashanth Kumar faculty members coordinated the visit.

The main objective of this visit is to

Give an overview of the different parts in the hydro power plant.

Enhance the knowledge on the working of hydro power plant.

Varahi Hydro Electric Project is a 4 Units x 115MW = 460 MW hydro power plant. The river Varahi takes its birth at a height of 730 m in the Western Ghats at Hebbagilu, near Agumbe in Shimoga District. Varahi is Karnataka's first underground powerhouse – a key milestone in the corporation history of KPCL.

Varahi Hydro Electric Project, initially conceived as a surface power house at the blueprint stage. Later converted into an underground Powerhouse due to Economical and Concern for environment protection. Varahi was started with Two different stages. Stage I of the Varahi Hydro Electric Project has a total installed capacity of 230 MW and Stage II of the Varahi Hydro Electric Project has a total installed capacity of 230 MW contributing 1100 MU annually. This consists of 4 x 115 MW generating Units at Varahi underground Powerhouse. We also visited Mani Dam (Dam attached power plant) where two 4.5 MW units are set up.

This visit enhanced students' knowledge on:

Idea of the working environment of the hydro power station.
Parameters considered for the selection of turbine in the plant.
Working principle of Pelton and Kaplan turbine.

2. GWASF Quality Castings Baikampady: Industrial Visit

One day industrial visit was organized for all Second year students on four different days to "**GWASF - Quality Casting, Baikampady**". Total of 154 students along with staff took part in the visit.

The main objective of this visit is to give an overview of the Manufacturing Process particularly Metal Casting:Pattern Section, Molding section, Melting Section, Fettling and cleaning and inspection, enhance their knowledge on Heat Treatment, Welding, machining and Nondestructive testing.

GWASF manufactures a range of castings in a large variety of alloys from a weight range of 10 kg to 450 kg. The castings are designed and manufactured to meet international safety standards such as the European PED for pressure vessel castings and Lloyds/DNV for marine applications. They manufacture products like pumps casing and safety valves. GWASF has a large base on sub-contractors and in-house machining facilities. The company has high end machining capabilities to meet tight tolerance components. Components are surface finished, painted and pressure tested according to our customers' requirements.

The visit has enhanced the students' knowledge on metal casting process. Mr Rudolf D'souza, Mr Chiranth, Mr Sushanth, Mr Rolvin D'Silva, Mr Akshay, M Rahul, Ms Ramya, Mr Jinu, Mr Santhosh, Mr Nitheesh faculty members coordinated the visit.

3. NMPT, Panambur: Industrial Visit

One day industrial visit was organized for Third year Mechanical Engineering students to "**New Mangalore Port Trust, Panambur**" on 25/10/2019. Total of 48 students along with staff took part in the visit.

The main objective of this visit is to give an overview of the various sections in the port and to enhance the knowledge about the different machinery used to handle the cargo.

NMPT was officially opened in 1975. In the year 1962, projects that were associated with the port were initiated. It is the only major port in Karnataka and ninth biggest port of India. NMPT imports and exports iron ore concentrates and pellets, iron ore fines, LPG, fertilizers, phosphoric acid, crude and petroleum products and liquid chemicals.

Ms Sushma, Safety Engineer of NMPT welcomed the students. During the visit she showed various sections of the port. She briefed about the history, operations occurs at various terminal, loading, unloading and tracking systems of the container and disaster management system established at the port. She also explained the working of stackers, offshore cranes and Excavators systems.

The visit has enhanced the students' knowledge on packing, shipping, loading, customs formalities, and storage facilities in the port. Also, they understood different machinery used in the port to handle the materials. Overall the visit was educative and informative.

Mr Chiranth and Mr Sushanth Faculty coordinated the visit.

4. MRPL, Surathkal: Industrial Visit

One day industrial visit was organized for second year students to "**Mangalore Refinery and Petrochemicals Limited** "on 18/11/2019. Total of 35 students along with three staff took part in the visit.

The main objective of this visit is to give an overview of the different sections in MRPL and enhance the knowledge on processing of crude oil.

Mangalore Refinery and Petrochemicals Limited (**MRPL**), is an oil refinery at Mangalore and is a subsidiary of ONGC, set up in 1988. The refinery is located at Katipalla, north from center of Mangalore city. The refinery was established after displacing five villages of Bala, Kalavar, Kuthetoor, Katipalla, and Adyapadi.

The refinery has a versatile design with high flexibility to process crudes of various API gravity and with high degree of automation. MRPL has a design capacity to process 15 million metric tonnes per annum and is the only refinery in India to have two hydrocrackers producing premium diesel (high cetane).It also has a Polypropylene unit with a capacity of 4,40,000 MT/annum. It is also the only refinery in India to have two CCRs producing unleaded petrol of high octane. Currently, the refinery is processing about 14.65 million tons of crude per year and had a turnover of US$9 billion during last year.

Mr Satish, Chief Manager of Materials welcomed the students. During the visit he showed various sections of the plant. He briefed about the history, operations occurring at various sections, reactors, crude oil storage, products that are produced in MRPL and showed how control of the entire plant is done.

This visit enhanced students' knowledge on

- Idea of the working environment of the refinery plant.
- Knowledge gained on Byproducts of crude oil.

Mr Chiranth, Mr Santhosh H and Mr Akshay N H, Faculty coordinated the visit.

5. Interactive Meet on Future Trends in Manufacturing: Invited Talk

Mr Krishnamoorthy K, the Director of Training at Indian Machine Tool Manufacturers Association – IMTMA conducted an Interactive Meet on Future Trends in Manufacturing on 30 January 2020.

Heads of Departments and Senior Faculty from various Engineering Colleges participated in this interactive meet. A total of 24 Faculty members participated in the Interactive Meet, out of which, 11 members were from various engineering colleges of the region. The event commenced with the welcoming of the participants and introduction to Mr Krishnamoorthy M. For over 30 years of his continued engineering practice in the industry, Mr Krishnamoorthy M has acquired astute expertise in the application and use of GD&T principles in CAD/CAM, high precision CNC machining as well as conducting Technical Trainings. Prior to working at IMTMA, Mr. Krishnamoorthy has worked at ISRO Satellite Centre, Bangalore in the field of Precision Machining of satellite on –board components. After ISRO, he was with Perfect Moulds and UMS technologies as a specialist in Tool Planning and Production and Technical Training in CAD/CAM/ CAE, respectively.

The interactive meet was conducted over two sections. The first section that commenced at 10:30am was on the Future trends in manufacturing - Automation, Robotics and Industry 4.0. Mr Krishnamoorthy spoke about the changing landscape of manufacturing from the point of view of Industrial 4.0. Through a set of interesting videos, he was able to point out the dynamic growth and development in the field of Robotics and Automation. The interaction was active and a lot of enthusiasm was reserved for Collaborative Robotics that merges the human – robot workspaces. Mr Krishnamoorthy also spoke about the challenges going forward and the need for skilled workforce to meet the changing needs of the manufacturing sector.

The second session was focused on Indian Machine Tool Manufacturers Association and about its training modules. IMTMA has been conducting Finishing School and related training programs in modelling and manufacturing aimed to bridge the gap in practical knowledge of fresh graduates. A well-established training center at Bangalore is also a hub for internships and training programs. The association has also set up online training services through their online portals that are beneficial for faculty, students and industry personnel.

The event concluded at 1:30 pm. The interaction reveals the urgent need to train our students on advanced manufacturing technologies and contribute the workforce towards Industry 4.0. Post lunch at 3:30 pm, a discussion was held with My Krishnamoorthy in the Board Room that was attended by Dr Rio D'Souza, Principal – SJEC, Rev. Fr Rohith D'Costa, Assistant Director – SJEC, Rev. Fr Alwyn D'Souza, Assistant Director, Prof Sureshnath M L, Head – TPC, Ms Sangeeta Ferrao, Placement Officer – SJEC, Mr Chiranth B P, Coordinator – IIC, and Mr Sathyendra Bhat, Chairperson of Industry Interaction - SJEC. Mr Krishnamoorthy delivered a presentation on the functioning of IMTMA and its multitude of training programs. The members agreed on the need to pursue an MOU between SJEC and IMTMA that works for the benefit of student community of the region. The meeting concluded with the promise of collaborations and an intent of visit to IMTMA.

6. KIOCL, Panambur: Industrial Visit

One day industrial visit was organized for Second year students to "**Kudremukh Iron Ore Company Limited**" on 29/02/2020. Total of 26 students along with two staff took part in the visit.

The main objective of this visit is to

1. Inculcating the basic knowledge about steps involved in Processing of Iron ore.
2. Experience and understand real life situation in an industrial organization and related environment.

KIOCL Limited (Formerly known as Kudremukh Iron Ore Company Limited), a Flagship Company under the Ministry of Steel, Govt. of India was formed on 2 April 1976 for mining and beneficiation of low grade iron ore at Kudremukh, Karnataka, India. KIOCL has been a pioneer with over four decades of experience in operating Iron Ore Mining, Beneficiation and Iron–Oxide Pelletisation in the Country. KIOCL is having facilities to operate 3.5 MTPA Iron-oxide Pellet Plant, Blast Furnace Unit to manufacture 2.16 lakh tons per annum Pig iron at Mangaluru, Karnataka. KIOCL is an EoU and a profit making, continuous dividend paying company with a positive net worth and Mini Ratna Category I PSU is also an **ISO9001:2015, ISO14001:2015 and ISO45001:2018** certified Company.

This visit enhanced students' knowledge on

- Idea on the working environment of the company.
- Different steps involved in processing of Iron ore.
- Different types of conveyors used to handle ore.
- Implemented safety practices in the industry.

Mr Santhosh H and Mr Raghavendra Prasad, Faculty members coordinated the visit.

Renewal of MoU with V&G Industrial Testing Services Pvt Ltd Baikampady Mangaluru

SJEC renewed Memorandum of Understanding (MoU) with V&G Industrial Testing Laboratories Pvt. Ltd, Plot No. 323 G(P), Industrial Area, Mangaluru, Karnataka 575028 on 24 August 2019 under the leadership of Dr Sudheer M, Head of Mechanical Engineering SJEC. Previously the MoU was in place from 2016 to 2019 and with the renewal memorandum shall remain in place from August 2019 until July 2022. The MoU was signed by Director SJEC, Rev Fr Wilfred Prakash D'Souza and Executive Director V&G, Mr Girish Babu. During previous two academic years, several students from Mechanical Engineering have undergone internship training and ASNT Level II Certification Courses in different NDT (Non Destructive Testing) methods at V&G Industrial Testing Laboratories Pvt. Ltd. Students from Mechanical and Civil Engineering at SJEC have also visited V&G Industrial Testing Lab. V&G being an NABL accredited lab has also extended project assistance to our final year students.

The service rendered by V&G include:

Depute personnel as resource persons to engage in workshops on NDT for students of SJEC.

Provide technical assistance in academic projects of students from SJEC.

Facilitate industrial visits and training for students and faculty members of SJEC.

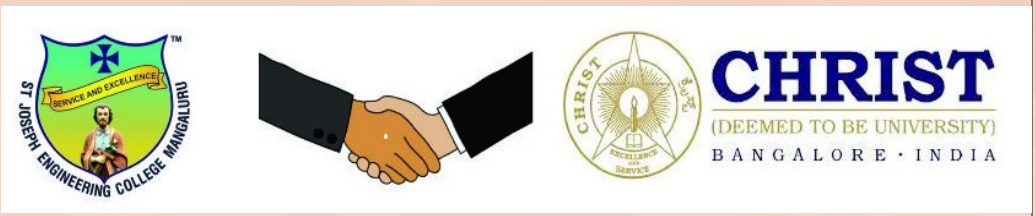
Depute resource persons to engage in Classroom teaching for students of SJEC on topics related to material testing and analysis.

Address:
V&G Industrial Testing Laboratories Pvt. Ltd,
Plot No. 323 G(P), Baikampady Industrial Area,
Mangaluru, Karnataka 575028
Phone: 0824 240 0475
Tel.: (O) +91-824-2400475
Fax: +91-824-2400475
E-mail: vg_testing@yahoo.co.uk
Website: http://vgitl.com/

MoU with CHRIST (Deemed to be University) Bengaluru

SJEC has signed Memorandum of Understanding with CHRIST (Deemed to be University) Bangalore, on 11 June 2019, under the leadership of Dr Purushothama Chippar, Professor, Mechanical Engineering, SJEC and Rev. Fr Joseph Varghese Kureethara, Associate Professor, CU. The MoU was signed by Rev. Fr Wilfred Prakash D'souza, Director, SJEC Mangaluru and Dr Anil Joseph Pinto, Registrar, CU Bengaluru. The Purpose of this covenant is to build friendship, goodwill and foster a relationship that will promote mutual intellectual exchanges between students, faculty members and administrators of SJEC and CU. This agreement is anchored and monitored by the Mechanical Department and also is open to all the departments to work under on exchange program that seeks to promote an academic exchange and to provide collaboration in research efforts.

Address:
CHRIST
(Deemed to be University)
Hosur Road, Bengaluru - 560029,
Karnataka, India
Tel: +91 804012 9100 / 9600
Fax: 40129000
Email: mail@christuniversity.in
Web: http://www. christuniversity.in



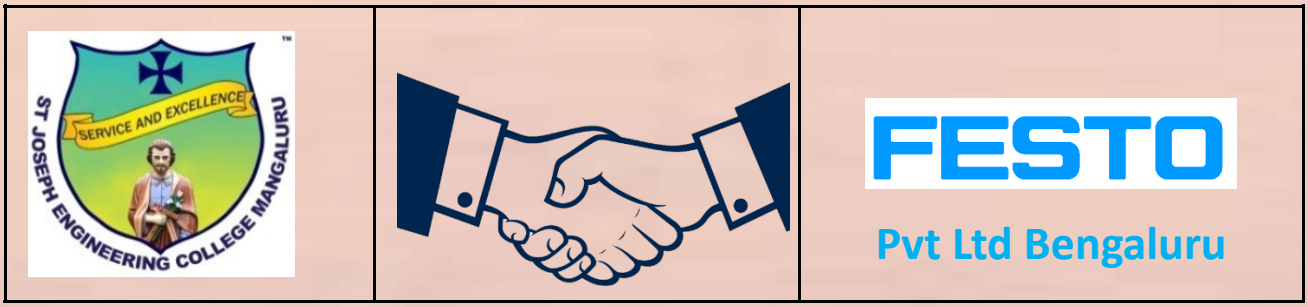
MoU with FESTO Pvt Ltd Bengaluru

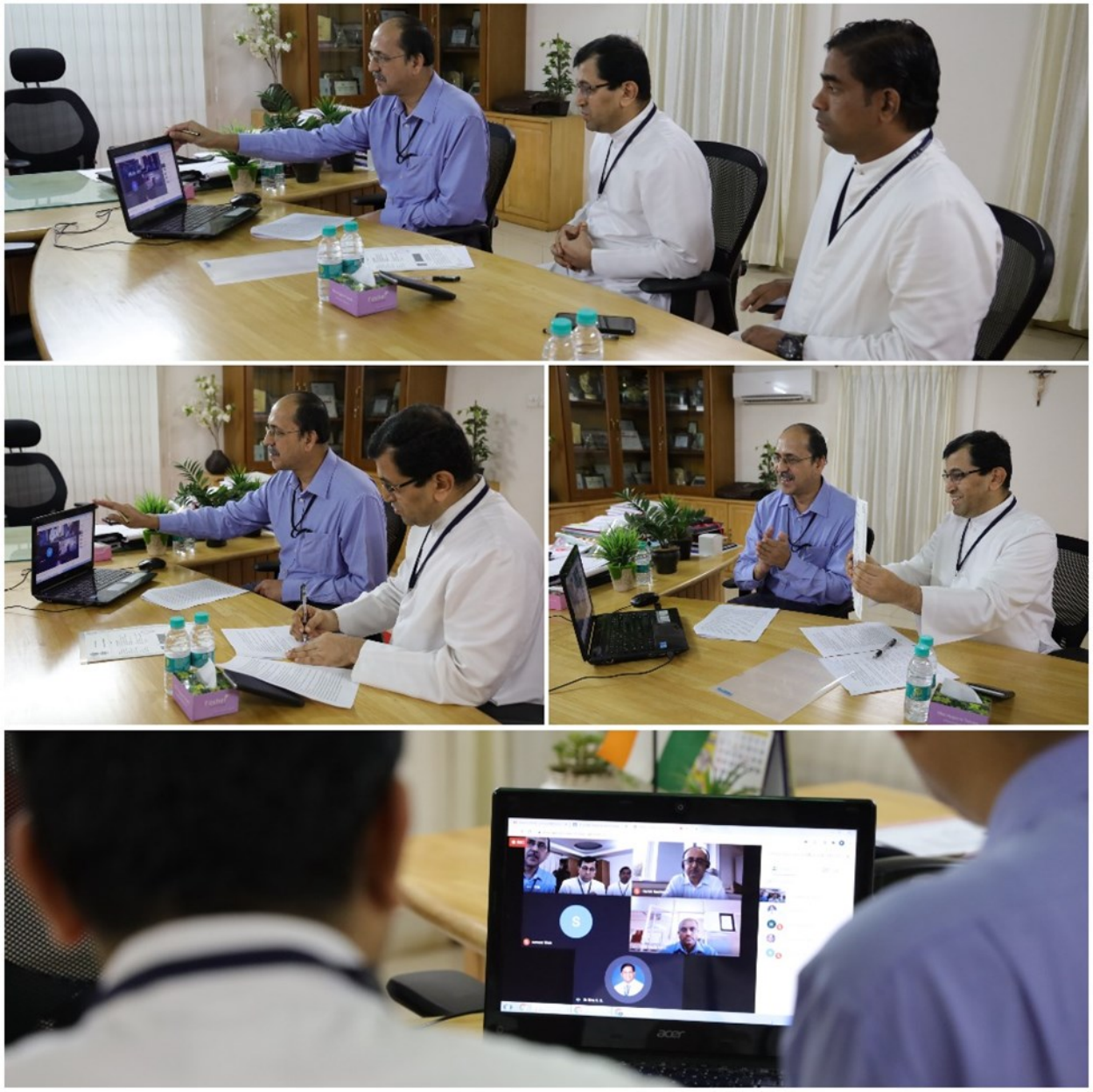
SJEC has signed Memorandum of Understanding with FESTO India Pvt. Ltd Bengaluru on 11 Sept 2020 under the leadership of Dr Sudheer M and Dr Binu K G, Mechanical Engineering SJEC. The MoU was signed by Director SJEC, Rev Fr Wilfred Prakash D'Souza and Head – Didactic, FESTO, Mr Harish Nachnani. This MoU will be in place for three years.

This MOU intends to encourage the following major activities between SJEC and FESTO:

- To facilitate industry oriented hands-on training in the field of Industrial Automation / Mechatronics using appropriate equipment and simulation tools for the students, faculty and working professionals from the Industry.
- To set up Centre of Excellence / Experience Centre with laboratories equipping FESTO Didactic training solutions in the field of Pneumatics, Hydraulics, PLC, Factory Automation, Process Automation etc.
- FESTO will provide necessary maintenance and troubleshooting services for the equipment and software being installed in the laboratory.

Address:
FESTO India Pvt. Ltd.,
237 B, Bommasandra Industrial Area,
Hosur Road, Bengaluru-560099
Karnataka, INDIA





Future of Industrial Automation

List of MoUs

Sl No	Particular	Objective	Year of establishment
Departmental Level MOU's			
1	V&G Industrial Testing Laboratories, Mangaluru	To provide training and certification courses on NDT techniques.	2016 – 2019, 2019- 2022
2	Wolfram Thurm, BauhasUniversitat Weimar, Dresden, Germany	To develop and build a machine that recycles low value garbage into usable construction material.	2017 - 2019
3	SKF Boilers and Driers Pvt Ltd, Moodabidri	To provide the framework, for any future binding contact regarding the industrial training and internship on precision manufacturing.	2018 - 2021
4	Karnataka German Technical Training Institute, Mangaluru	To impart skill development under different training programs.	2019 - 2022
5	Malnad College of Engineering, Hassan	To recognize the strengths in research and education in engineering and basic science discipline and their mutual interest in engaging themselves in cooperation.	2019 - 2024
6	CHRIST (Deemed to be university), Bengaluru	To build friendship and goodwill and foster a relationship that will promote intellectual exchanges.	2019 - 2021
7	FESTO India Pvt. Ltd, Bengaluru	To facilitate industry oriented hands on training in the field of Industrial automation/ Mechatronics using appropriate equipment and simulation tools for the students, faculty and working professionals from the industry.	2020 – 2023
8	CHD Group, India Country Office, Mangaluru	To promote academic co-operation and exchange of domain knowledge in education and research, publications, technical assistance and jointly carry out research and innovation.	2020-2025
College level MOU's			
1	Study Metro Pvt Ltd, Bengaluru	To Promote higher education, create student and faculty exchange programs, conduct guest lectures and webinars in foreign universities.	2018 - 2019
2	CoCubes Technologies Pvt Ltd Gurgaon	To provide online career development services.	2018 - 2021
3	ATS InfotechPvt Ltd/ Knowledge Solution India	To offer international certifications to the interested students from different vendors at academic discounted price	2018 - 2021
4	IDP Education India Pvt Ltd, Mangaluru	To help students to gain admissions to education institutions in the main English-speaking countries.	2018-19, 2019-2020, 2020-2023
5	Father Muller Charitable Institutions, Mangaluru	To promote academic cooperation and exchange of domain knowledge of materials in education and research, publications and academic information.	2019 - 2024

List of MoUs...

6	Planet Education, Karnataka	To provide free workshops / seminars / fairs exclusive to the students of SJEC and increase their knowledge about overseas studies and for helping SJEC students to make the right academic choices.	2019 - 2022
7	Old Dominion University, Norfolk, Virginia US	To make every reasonable effort to encourage direct contact and research cooperation between the faculty members, departments and research institutes.	2019 - 2024
8	College of Information and Electrical Engineering, AU, Taiwan	To define the areas for cooperation in which the parties intend to work together in the future for mutual benefit, specifically, to formulate an institutional framework between SJEC and CIEE.	2019 - 2024
9	JV Global Services LLP Bengaluru	To establish a strong training collaboration by conducting placement related aptitude trainings, evaluating performance and robustness of the students prior and after training, documenting overall conduct of students throughout the aptitude programme and counselling along with taking corrective steps to the required students as and when the requirements arises.	2019 - 2022
10	Dundalk Institute of Technology, Dundalk, Ireland	To facilitate the development of closer cooperation and cover the normal educational activities of both institutions.	2019 - 2024
11	Karnataka Small Scale Industries Association, Bengaluru	To impart industrial skill awareness and nuances of entrepreneurship among students in addition to arrange industrial awareness programs to the faculty.	2019 - 2022
12	Exponent Consultancy Services (ECS), USA	To help students to get admission in European Countries, especially in Germany.	2020 - 2025
13	Ardelis Technologies, Mangaluru	To provide project, internship training and strengthen the future employability prospects of the student.	2020 - 2025
14	St Aloysius College (Autonomous), Mangaluru	To enhance the overall quality of the mentee institutions and mentoring the Non-Accredited Higher Education to enable to get accredited.	2019 - 2020
15	AIESEC in Manipal Academy of Higher Education, Mangaluru	To provide the best technical opportunities available across different countries and helping students to explore and develop their leadership potentials globally.	2019
16	Kanara Chamber of Commerce & Industry, Mangaluru	To have an Industry - Institute interface to enhance the confidence of the students by nurturing young minds and help budding young talents.	2019 – 2021
17	St Aloysius College (Autonomous), Mangaluru	To develop mutual agreements for co-operation based on academic, scientific and research needs	2018-2023
18	Boston University Metropolitan College International, USA	To explore academic exchange program, internship and higher education opportunities with exempted cost	2020-2023

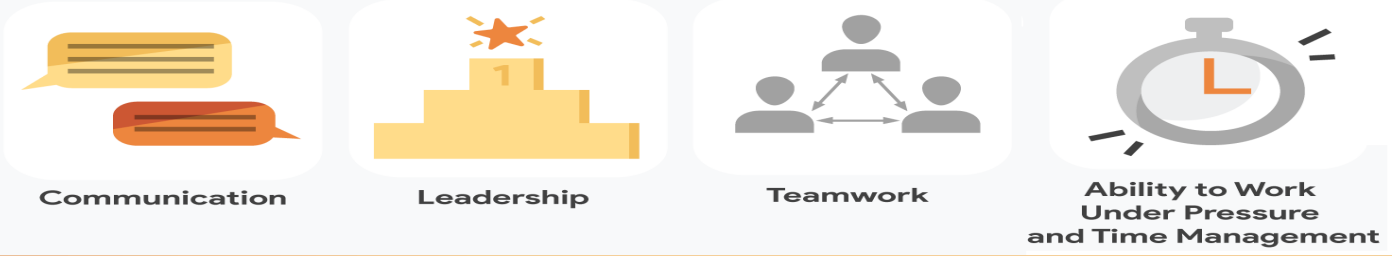
INTERNSHIP TRAINING: ACADEMIC YEAR 2019-20

A total of 175 students form final year and pre-final year BE - Mechanical Engineering programme have attended internship training for the academic year 2019-20 in various companies listed below during the vacation breaks in the month of July 2019 and January 2020. The internship training spanned from 1 to 4 weeks based on the company's requisite. The students were encouraged to attend the internship training in any company or industry as per the individuals' interest. The participation certificates of the students in the internship training and the reports are maintained in the department files.

List of the Companies/Industries the students have completed the internship training:

Sl. No.	Company Name	No of students	Sl. No.	Company Name	No of students
1	HAL Bengaluru	04	22	Konkan Railways Surathkal	05
2	KGTTI Mangaluru	15	23	NMPT Mangaluru	07
3	KH Designs Pvt Ltd Bengaluru	15	24	Lobo Sales Corporation Baikampady	01
4	SKF boilers and Driers Moodbidri,	04	25	Amar Jyothi Automobiles, Padil, Mangalore	01
5	V & G Industrial Testing Laboratories Pvt. Ltd., Baikampady	09	26	Canara Springs Pvt Ltd, Maroli, Manglaore	02
6	ADE Bengaluru	02	27	Indian Oil Corporation Limited Bihar	02
7	Hyderabad Engineering Labs Hyderabad	02	28	Mandovi Motors Pvt Ltd Mangaluru	20
8	TMEIC Industrial systems India Pvt Ltd Bengaluru	01	29	KSRTC Hassan	03
9	Shri Balaji Agro Engineering Kalaburagi	01	30	Mangalore Chemicals and Fertilizers Mangalore	03
10	BEML Mysuru	09	31	BMW EVM AUTOKRAFT Kochi, Kerala	04
11	Lamina Foundries Karkala	12	32	Amana Toyota Kasaragod	02
12	Lamina Suspension Products Manggaluru	02	33	Centre of Excellence Aerospace and Defense Bengaluru	04
13	Alankar Steam Driers Nandikur	06	34	Trans Rail Ltd Maharashtra	02
14	KMF Kulashekar Mangalore	03	35	Arvind Motors Pvt. Ltd Kulur Mangaluru	05
15	Volvo Bengaluru	01	36	Bijjaragi Tata Motors Vijaypur	01
16	M N Industries Bengaluru	06	37	Volkswagon, Goa 4	01
17	Karnataka agencies, Udupi - Mahindra motors	02	38	SKF Fabrics Moodbidri	01
18	Aditya Birla Chemicals Limited, Karwar	01	39	TURBOCAM Goa	01
19	Bosch Bidadi Bangalore	04	40	KSRTC Mangalore division	01
20	Pai Kane Groups Goa	01	41	AUDI Pvt Ltd, Kulur Mangaluru	02
21	GTRE Bengaluru	05	42	Western India Plywood Ltd. Kerala	02
				Total	175

Key to Success:



Internship: Questions and Answers

Athulya Suresh

1. What made you to opt for doing internship in KGTTI, Mangaluru?

Karnataka German Technical Training Institute (KGTTI) by KGMSDC has an official collaboration with the institute I am studying in St. Joseph Engineering College, Mangalore.

As I was guided by my academic mentor, KGTTI has already set a benchmark in will development. I realised that KGTTI is the only institute where I can develop my knowledge and skills on various Industrial Technical Fields and train in alignment with the industrial required all over the world. As the programs and standard offered by KGTTI is demand oriented and directly imply a close relationship with industry and it was best option considering my convince, hence I opt for doing internship in KGTTI,Mangaluru.

2. Support from SJEC to your internship?

My institution St. Joseph Engineering College Mangalore, has signed the MoU with the KGTTI with the sphere of competences of working with the youth and for youth towards skill development, advance technology hands-on training to enhance the employment opportunities of engineering students, I stand by institution as they have totally been up to their word providing world class training program along with KGTTI , Institute have been really supportive with the proper guidance and supported as per my expectations throughout the Internship.

3. Can you tell the relevance between the internship you did and the courses you learnt in SJEC?

The course I have learnt in SJEC is more inclined to the theoretical knowledge of industrial equipment and handling them, Internship helped me provide a hands-on experience and applied knowledge of industrial equipment and help me gain required skills in practical terms and internship are always meant to gain relevant knowledge, skills and experience while building important and required connections in the field, as I undertook internship on Industrial Refrigeration and Air-conditioning, Advance welding technology was very relevant to gain hands-on experience for the course I undertook in SJEC.

4. What are the expectations of the company or organization from the student who is doing the internship?

As internship is an important and major experimental academic experience in which the students who is doing internship experience their first application and test knowledge learned in the classroom to a professional work environment so the only expectations of the company or organisation from the students would be the standardized mentoring, demanding skill development, real world exposure based on the field, benefiting portfolio, Building important connections and network, flexible schedule and affiliation in a organisation.

5. Challenges faced by you while undergoing internship and the way you overcame those. Your experience when you learnt new skill

I went to internship with an abundant amount of theoretical knowledge I have gained in past few years of my course of academic. Theoretical knowledge is far divergent to the technical or practical aspect of its application, in the beginning it was very difficult to connect the dots of theoretical knowledge and practical aspects but the standardized quality mentoring and guidance by KGTTI I helped myself to overcome those minor difficulty. Learning new skill is always a pleasant experience of learning how to tackle problem with a logical approach to any situation.

6. Advantage of doing internship with the perspective of your placement.

Learning is not confined to classroom, happens thorough out the life and in a range of situations, it means moving away from the comfort of books and theories. Putting together the knowledge gained into with a benefit of building technical and professional skills so any Internships are an important part of education. It is beneficial for a smooth transition from university to labour market. Working with an affiliated organisation is always an eye-opening experience because it is almost impossible to adapt the reality of chosen career without working on it. And it is also one of the best ways to make contacts and build network within the field of chosen career.

7. How internship changed your way of looking into the Mechanical Engineering Course.

There is a misconception that Mechanical Engineering is all about solution orientation, creativity and having least passing knowledge of mathematics and technology, but that isn't all Mechanical Engineering focuses on the design, manufacturing, testing, improvement of mechanical systems which are used in virtually any industry we can think of moreover it is about versatile and the various career opportunities available after graduation and internship at KGTTI helped me understand the importance and wide practical application of Mechanical Engineering.

8. What would you tell the current students about corporate culture, professionalism, etiquettes, and work-life balance that you experienced during your internship?

Corporate Culture, Professionalism, etiquettes, and work life balance that I experienced during my internship at KGTTI was

Friendly, Challenging, Motivating, Engaging, Nurturing, Collaborative, Autonomous. KGTTI is an organisation with an ultimate mission and vision of helping consistence and quality to the knowledge of a perceiver also with ethics and integrity, respect and fairness, Teamwork makes the dream work, communication and transparency is the key to success, work life balance is adequate for one who are interested enough to achieve. We can create an atmosphere of innovation, professionalism, communication, and trust by involving ourselves with the organisation vision, mission, and work ethics.

9. The Department has an Industry Interaction Club (IIC). Your advice for the club.

Industry Interaction Club is doing its job right, there is not much of any advice to be given for the improvement but The only suggestion could be given is to collaborate with more institution and more advance equipped industries. Build a strong background network within the required industry having well advance technology and equipment's, get more exposure to the industry and institution in the field.

10. Top three suggestions you would like to give to the current students while choosing the internship opportunity?

A) Find a good reviewed, relevant, and self-interested stream to undertake the responsibilities of an Internship, try to seek advice from the professors or seniors about the relevancy.

B) Choose an affiliated, well oriented, advance equipped industries or organisation to perceive Internship

C) moreover, it's about individual's effort and compassion towards the organisation and the stream chosen by them to the intern.

Internship: Questions and Answers

1. What made you to opt for doing internship in V&G industrial Testing services?

Harsha Kiran Shetty

V&G industrial testing laboratory is basically a testing company which is one of the well-known testing laboratory services in Mangalore. The courses that are offered in this testing laboratory has good scope in the future in the industry. The courses provided by them are based on different mechanical testing methods. The suggestions and feedbacks received from the seniors who have done their internship in V&G industrial testing services were also good which made me to opt for the same.

2. Support from SJEC to your internship.

The theory behind the different processes carried out during the internship was already taught in the college has demo course making it easier to grasp the concepts. The professional ambience of industry was already paralleled in the college. The head of our mechanical department Dr. Sudheer M had given a presentation about the courses and also deep insight picture of the industry and also helped us to join that industry to carry internship and also about other certification courses provided.

3. Can you tell the relevance between the internship you did and the courses you learnt in SJEC?

The courses conducted in our college had given us theoretical knowledge of different testing methods, and also the demo of few of the testing methods was shown in the material testing laboratory of our college, but the industry where I carried out internship, I got an opportunity to conduct all the testing methods practically which made me understand the concept very clearly, and also a new practical experience.

4. What are the expectations of the company or organization from the student who is doing the internship?

The expectation of the company from the student who is internship is that they want each and every student to engage in their theoretical lecturer so that the student won't face any difficulty during practical hours. They also wanted students to interact with them during the sessions and clear the doubts we had. They also conducted quiz every week so that we memorise and be updated with what is taught to us. They also wanted the students to be very punctual and active during practical as well as theoretical sessions.

5. Challenges faced by you while undergoing internship and the way you overcame those. Your experience when you learnt new skill

Initially it was not that easy to conduct practical testing as how I thought when it was taught during theoretical sessions. But, with the repeated practice and also guidance from the guide in the testing laboratory I could overcome it. In college we were provided with some basic knowledge about the testing methods so it was a bit hard initially for me to understand the concepts clearly, which has sessions passed became clear the overall experience was very good and the guide who was training me was very friendly and helped me in all my way of difficulties during practical and theoretical sessions and also gave me the information regarding the scope of working under those field of area.

6. Advantage of doing internship with the perspective of your placement

The internship training where I attended is purely based on the mechanical testing method which has wide scope all over. The internship also adds weightage to my resume. As a mechanical engineer student I would love to work in mechanical core company, so doing internship based on mechanical testing method would be advantage factor for me for the placement in the core companies. Scopes in the field of mechanical testing methods are also high which would be a positive point in the placement.

7. How internship changed your way of looking into the Mechanical Engineering Course.

Being a mechanical engineer student practical knowledge is equal or more important along with the theoretical knowledge. Through, internship I could get a little practical knowledge which helps me to get a practical experience and also to give me a brief idea of how practical knowledge and experience is important in industry. Having practical knowledge and having practical experience makes a differences and internship is the best example. As a mechanical engineer student I feel practical experience gained during internship helps in understanding the course more clearly than how it is taught theoretically.

8. What would you tell the current students about corporate culture, professionalism, etiquettes and work-life balance that you experienced during your internship?

Currently in this corporate culture, industry looks for skills and practical experience along with theoretical knowledge in an individual. Industrial etiquettes are more important to be a best among others. And in the field of mechanical testing methods there is a wide scope as a profession and there are particular institutions that provided courses on those testing methods which have high demand in the society. During the internship there no problem in balancing my college work and any other extra circular aspects of works as both went hand in hand.

9. The Department has an Industry Interaction Club (IIC). Your advice for the club.

I would advise the industry interaction club to take the students to such industries which can provide the students, about some additional practical knowledge through experiences of guides in the industry and also to contact some more good industries where it will be helpful for student to understand about the subject as well as to gain additional knowledge. Through this practical knowledge one can understood about the process clearly. Such industry visits will bring enthusiasm in the students to learn more about industry and the practical knowledge which gives clear idea about the need in the industry. There will be difference in the aspects learned theoretically and practically. So I would advice industry interaction club to take students to some good industry for visits and learn from industry experts.

10. Top three suggestions you would like to give to the current students while choosing the internship opportunity?

- Choose the best course that has future scope and the best industry that provides the course. It's better to carry out some research work on industry with the help of faculty and seniors.
- Choose the industry that helps you to learn more of practical things and get practical experience while working with the industry during internship.
- Take suggestions from lectures for the best courses and opportunities and also can contact seniors who have carried out internship in some industries and ask them about their experiences in the industry during internship.

8 Key Competencies expected in an intern

INTERNATIONAL INTERNSHIP


Ryan Mario Fernandes

Mr Mario Ryan Fernandes from send year Mechanical Engineering has completed six weeks internship on "Global Entrepreneur" organized by AIESEC during Jan-Feb 2020 at Cairo, Egypt.

"AIESEC is an Organization that provides International Internships to students from various streams. I had the opportunity to work with them when I was in the second year of my Engineering studies.

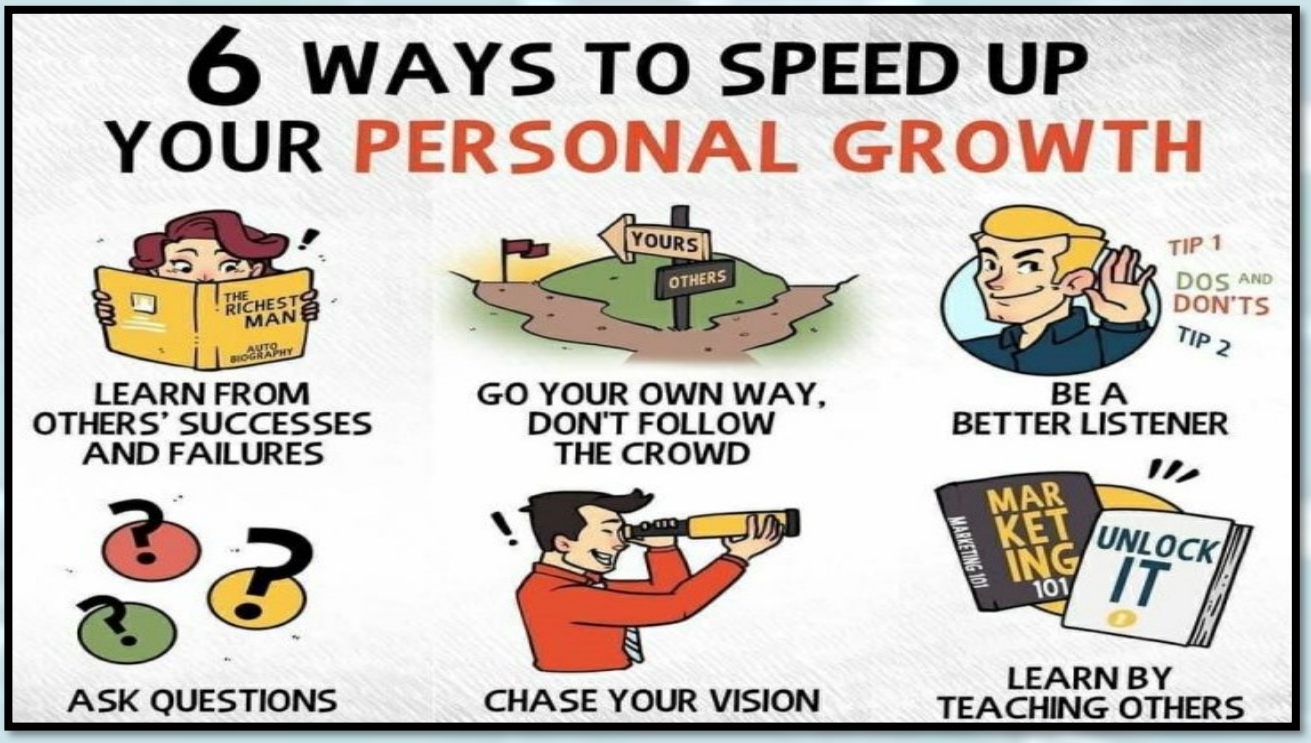
I was first introduced to AIESEC when the Collaborations Office of our college held a seminar for the students. Sitting through the seminar with rapt attention and listening to varied experiences of the Participants, changed my perception of International Internships. I lost no time in enrolling myself with this organization as I was very keen on interning abroad. I was contacted by AIESEC immediately thereafter and the Collaborations Office ensured that there was seamless communication between the organization and me. They also assisted me in various processes involved in securing the Internship.

On completion of the initial formalities, it was decided that I would intern in a Company called Solar Installer which was based in Cairo, Egypt. This company dealt with providing solar panels to residential & Commercial Buildings, Solar Parks for Business houses etc. Prior to my departure, I was briefed about the Country, how to act on landing at Cairo, whom to contact etc. When I finally did land in Cairo, I was received by the Representatives of AIESEC. I was escorted to the AIESEC Hostel where I was put up to spend the remainder of my stay in that Country. This hostel also housed people from various countries from around the world including India. I was given a span of 3-4 days to get myself acquainted to the food, weather, people and the place as a whole. All these things pushed me out of my comfort zone as I had never experienced anything like this. I started making new acquaintances with Students belonging to other Countries, sharing our interests, exchanging our culture, etc.

On the first day of my Internship, I was accompanied by the Representatives of AIESEC to help me reach my destination through easiest and cheapest available Public Transport. My Office was situated about 1.5 hours from the hostel. Due to the long hours spent on travelling, I had to wake up early in the freezing winter. I dreaded waking up early in the mornings, the sole reason being the freezing temperature. Such mornings were made better by sipping a cup of hot coffee bought on the way, as I kept conversing with my Colleagues. My timings were the usual 9 to 5 but we were cut some slack as we were just Interns. As I was from the Mechanical background, my work consisted of designing solar panel grids for the given Residential/Commercial spaces which mainly consisted of Roofs. We used various software such as Google Earth, PVSyst (Photo Voltaic System) for designing solar grids on these spaces. PVSyst is a solar simulation software that uses real time data of the earth and sun for the ideal calculation of power generated. My prior knowledge of CAD software which I learnt in the previous year of Engineering, helped a lot in the designing these spaces. I was called as an Intern and the Seniors in the office were very approachable. I was given a couple of Projects to work with and my Seniors helped me a lot to make better decisions at designing; at the right time. There was always a calm vibe in the office. We were given coffee and lunch breaks during the day. We were also provided with a kitchen for our use to heat food etc. I found this 9 to 5 schedule very hard to follow as it was my first experience working in an office space. But this hectic schedule taught me Time Management. Working in the office space gave me an idea of how my future white-collar job would like. This was all-through a humbling experience as I always thought "work" would be easy going.

Apart from this I had a chance to explore the touristic side of Egypt. I visited places like the Luxor, The Great Pyramids of Giza, Alexandria and a cruise on the famous River Nile. I had lots of fun on these adventures as I travelled with an interesting group of friends. Visiting these places made me embrace their cultures and gave me a chance to have a glance at their world.

All I can take from this experience is that I learnt to manage time and finance, improved social interactions and public speaking ability, learnt new cultures and languages, and acquired friendship from around the world. If given another chance, I would definitely go through this experience all over again".



RESEARCH CENTER

The Research Center in the Department of Mechanical Engineering explores the forefront of technologies that encompass the traditional aspects of the field while embracing and expanding the boundaries of new science and technology, thus providing an environment for advancing both education and research.

The research center was established in 2008 recognized by VTU-Belagavi with an objective to promote integrated, interdisciplinary research & education programs and expedite transition of research results into marketable products.

Areas of Research

- à Energy & Sustainability
- à Advanced Manufacturing
- à Material Science
- à Nanoparticle Science and Technology
- à Engine - Combustion and Alternate Fuels
- à Computational Fluid Dynamics

A spacious Research Center in the Dept. of Mechanical Engineering was on 14.09.2016. The Research Center includes separate room for Research Head and Research Scholars and also a Discussion room.

Advanced Manufacturing Research

The Advanced Manufacturing Research in SJEC is highly interdisciplinary in nature spanning the fields of material science, heat and mass transfer, fluid dynamics and mechanical design. Current areas of investigation in the field of process innovation and development include spray forming of Al-Si based piston alloys and spray casting of Al-Si alloys with Fe and Cu as alloying elements. The equipment's currently available for advanced manufacturing research are Pin on Disc wear testing set up, LEICA Optical Microscope, Hardness Testing Machine, Melting Furnace, Probe Sonicator and Specimen Polishing Machine.

AECAL

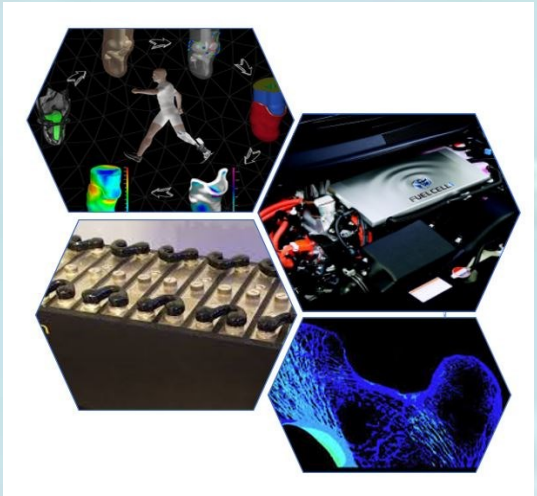
Advanced Engineering and Computational Analysis Laboratory

Established in 2015, the mission of SJEC's Advanced Engineering and Computational Analysis Laboratory (AECAL) is to conduct scientific research and technology development for a clean and sustainable environment. The AECAL aims to carry out novel research in carbon-free technologies required for a sustainable future energy system via experiments and numerical simulations with key strengths in:

Fuel cells and Batteries

Hydrogen production methods

Hydrogen storage and transportation systems



The AECAL provides a focal point at SJEC for multidisciplinary research on advanced technologies such as medical imaging to generate bone geometry & perform mechanical analysis and thermo-mechanical FEM analysis of human teeth.

Funded by sponsors from government, research institutes, and industrial sources, the AECAL has expertise in mathematical modeling, multiphysics problems, image processing, and experimental diagnosis.

The AECAL is always looking for new opportunities or people with expertise in cutting-edge technologies. Interested people are requested to contact Dr. Purushothama Chippar at purushothama@sjec.ac.in/cpballal@gmail.com

Facilities

Computational Lab consisting of high-performance computer systems equipped with STAR-CCM+, ANSYS Work-bench, Matlab and Simulink, and LabView software for advanced CFD, structural, and process modeling and simulation.

Fabrication/Test Lab featuring experimental setup for metal hybrid-based hydrogen storage and plasma-assisted fuel reformation.

AECAL Personnel

Dr. Purushothama Chippar	**Supervisor**	
Mr. Swaraj Dominic Lewis	Ph.D. Student	Metal hydride-based hydrogen storage method
Mr. Venkatesh Babu K P	Ph.D. Student	Computational modeling of fuel cell degradation
Ms Geethu Varghese	Ph.D. Student	Computational modeling of integration of fuel cell and metal hydride bed
Mr. Rahul Kumar	Research Scholar	Biomechanics
Mrs. Ramya M	Research Scholar	Computational modeling of batteries

Engine Research Group (ERG)

OBJECTIVES

This group is for formed with the following objectives:

- To provide common platform for the researcher on engines.
- To share knowledge among members
- To develop innovative ideas in the research on engines
- To develop research facility on CI engine
- To increase publications on engine and renewable fuels

AREA OF FOCUS

- Modification of engine & fuel
- Control of engine (engine electronics)

PLAN OF ACTION

- Minor Modification in the engine
- Suggested to have collaboration with GTTC, Baikampady.
- Getting technical knowledge from the experienced technicians
- Promoting competition among the students of the region for developing innovative ideas to control pollution
- To have discussions with different patents on the engine
- In house development of controlling of engine
- To promote project ideas for undergraduate students
- To have a collection of literature on IC engines.

SHORT TERM PLAN

- Experiments with minor modification on engine
- Experiments with alternate fuels

LONG TERM PLANS

- Setting up of Automated control system for engines.
- Consultancy Services to Research scholars

EXPECTED OUTCOME

1. Build up of a collection of literature on Engine research, modification of fuels and related fields.
2. Guiding projects for undergraduate students in the field of I. C. Engines and alternate fuels.
3. Publishing journal papers/ Conference papers.
4. FDP's on Engine and fuel related issues.

The Team ERG	
Chief Advisor	Dr James Valder
Advisory Committee	Dr K Raju Dr Purushothama Chippar
Group Mentor	Mr Prashanth Kumar
Members (Faculty)	Mr Rolvin D'Silva Mr Sharun Mendonca Mr Sushanth H G Mr Vijay V S Mr Prithviraj H

WORK UNDER PROGRESS

There are 5 faculty members and 20 students involved in the research work. The research activity involved in this group is classified into three different streams.

- **Performance analysis with CRDI engine**

Mr Prashanth Kumar has conducted study on CRDI engines with mahua methyl ester blended with diesel; different types of combustion chambers are used in the study.

- **Modification of fuel with additives**

Mr Rovin D'silva and Mr Sharun Mendonca are involved in research with nano particle blended bio-diesel on CI engine.

- **Performance analysis of conventional engine with alternate fuels**

Mr Sushanth G is involved in study of vetira indica bio-diesel blend with diesel on CI engine.
Mr Vijay V S is involved in study of performance analysis of neat diesel under pre-heating condition and performance analysis of 100% bio-diesel under pre-heating condition on CI Engine.

Composite Study Group (CSG)

OBJECTIVES

- To provide common flat form for the researchers on composite Materials
- To develop research facility on processing and testing of composite materials
- To enhance the outcome in terms of publications and proposals in the field of Composites

AREA OF FOCUS

- Metal Matrix Composites (MMCs): Preparation, Testing, Analysis and Applications
- Polymer Matrix Composites (PMCs): Preparation, Testing, Analysis and Applications

SHORT TERM PLAN

- Awareness about Novel Materials " Composites" among students
- Promoting interactions between staffs and students to develop new composites including nano-composites, bio-composites etc.

LONG TERM PLANS

- Setting up of standard fabrication facility for processing MMCs and PMCs
- Mechanical and Computation analysis of composites

EXPECTED OUTCOME

- Collection of Literatures on Composite Materials
- Guiding projects for undergraduate students in the field of Composites
- Publishing journal papers/ conference papers on Composites
- Exploring the possibilities of financial support from external agencies.

The Team CSG

Chief Advisor	Dr Raju K
Advisory Committee	Dr Shreeranga Bhat Dr Purushothama Chippar
Group Mentor	Dr Sudheer M
Members (Faculty)	Dr Suma Bhat Dr Jayavardhana M L Mr Ravikantha Prabhu Mr Chiranth B P Mr Noel Deepak Shiri Mr Pavana Kumara B Mr Poornesh M Mr Ashwin Shetty Mr Nitheesh D Nayak

Nanoparticle Study Group (NPSG)

This group was formed on 13th Feb 2016 under the leadership of Dr Binu K.G. The main intention of forming this group is to bring the faculties with common research area together for discussion. Meetings were held during which the mentor briefed on topics related to nanoparticle dispersion, dispersion methods, surfactants, stability of Nanofluids and its various applications. The faculty members used to discuss about the literatures review done by them in their field of research. A few student members are also involved in the study group who have taken up project work in the field of nanoparticle science.

OBJECTIVES OF THE STUDY GROUP

- Act as discussion forum for in-house faculty members and research scholars working in the field of application of nanoparticles in Mechanical Engineering.
- Develop in-house expertise in the area of nanoparticle synthesis and applications.

- Conduct student activities related to nanoparticle science, to contribute as Content beyond the syllabus.
- Define academic projects on nanoparticle applications in Mechanical Engineering for students.

EXPECTED OUTCOMES:

⇒ Literature bank on nanoparticles and nanofluids.
Details:
- · A Google drive account with SJEC domain will be initiated and all literature pertaining to nanoparticle science will be stored and access granted to members.
- · Relevant papers to be added by faculty members after discussion in weekly meetings.

⇒ Teaching and assessment resources on Applications of nanofluids in Mechanical Engineering – An overview.

⇒ List of ideas for continued research on applications of nanoparticles in mechanical engineering.

The Team NPSG	
Chief Advisor	Dr Sudheer M Dr Raju K
Group Mentor	Dr Binu K.G.
Members (Faculty)	Mr Rolvin D Silva Mr Sharun Mendonca Mr Yathish K.

PROPOSED FUTURE ACTIVITIES:

- Contribute to FDP sessions during semester break.
- Arrange invited lectures on nanoparticle science in collaboration with Departmental Associations.
- Submit research proposals to State and National funding agencies based on on-going research of the Group Members, to build research facilities in the Department related to nanoparticle applications.
- Generate publications in the field of nanoparticle science.

RESEARCH SCHOLARS

Research Scholar	Supervisor	Area of Research
Mr Prem Kumar (Ext)	Dr Joseph Gonsalvis	IC Engine
Mr Shyam Prasad (Ext)	Dr Joseph Gonsalvis	IC Engine - Modification & Performance Analysis
Mr Prashanth Kumar	Dr Raju K	IC Engine - Biofuel Combustion Characteristics
Mr Suresh K V (Ext)	Dr Raju K	IC Engine
Mr Harish K (Ext)	Dr Raju K	Materials
Mr Sushanth H G	Dr Raju K	IC Engine - Biofuel Combustion Characteristics
Mr Rolvin Sunil D'Silva	Dr Thirumaleshwara Bhat	IC Engine - Nanoadditives
Mr Ravikantha Prabhu	Dr Thirumaleshwara Bhat	Composite Materials
Mr Sharun Mendonca	Dr Thirumaleshwara Bhat	IC Engine - Nanoadditives
Mr Vijay V S	Dr Joseph Gonsalvis	IC Engine - Modification & Performance Analysis
Mr Avil Alwyn D'Sa (Ext)	Dr Joseph Gonsalvis	IC Engine
Mr Pavana Kumara	Dr Shreeranga Bhat	Materials science
Mr Swaraj Dominic Lewis	Dr Purushothama Chippar	Hydrogen Storage
Mr Anil Melwyn Rego (Ext)	Dr Shreeranga Bhat	Management
Mr Vikas G (Ext)	Dr Sudheer M	Polymer Composites
Mr Yathish Kumar K	Dr Binu K.G	Bearings
Mr Poornesh M	Dr Shreeranga Bhat	Materials science
Mr Vinoothan K	Dr Raju K	Materials science
Mr Ravikiran Kamath B (EXT)	Dr Sudheer M	Materials science

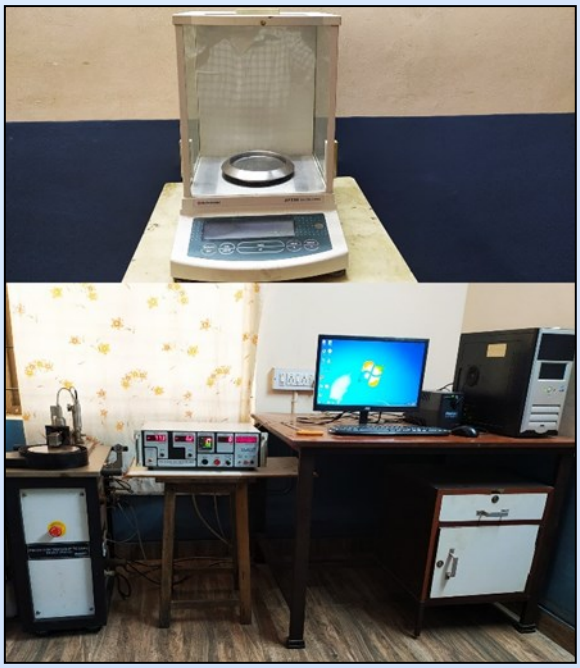
RESEARCH CENTER

Department of Mechanical Engineering
St Joseph Engineering College, Vamanjoor, Mangaluru 575028
Karnataka, India
Tel: +91 824 2263753 / 54 / 55 / 56 Ext: 190, Fax: +91 824 2263751

RESEARCH FACILITIES

- Computerised VCR IC Engine with Smoke Meter and Exhaust Gas Analyser
- Computerised High-end Pin-on-Disc Wear Testing Machine
- LEICA Optical Microscope
- High Performance Computing Facilities (with ANSYS 17.1 and STAR CCM+)
- Melting Furnace
- Shell and Tube Heat Exchanger
- Concentric Tube Heat Exchanger

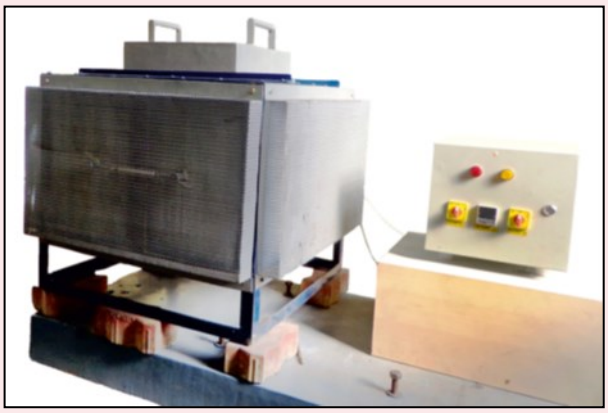
Computerized VCR IC Engine with Smoke Meter and Exhaust Gas Analyser



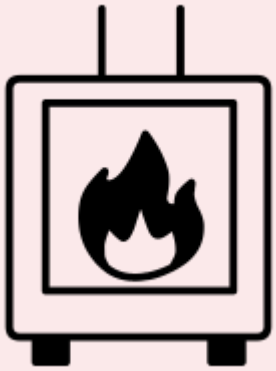
Computerised High-end Pin-on-Disc Wear Testing Machine

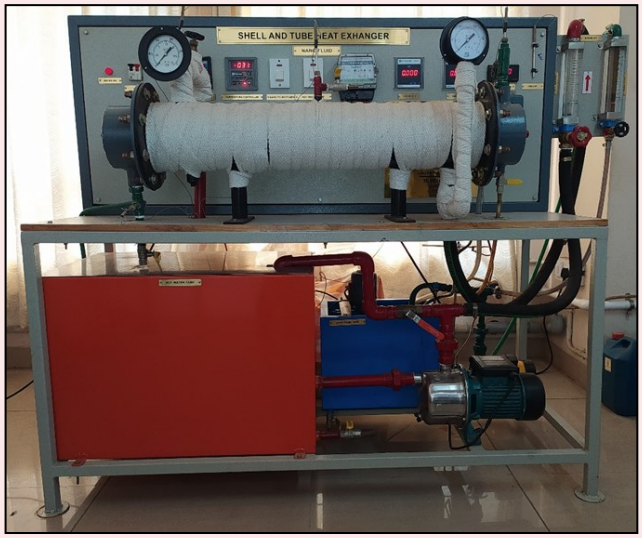
LEICA Optical Microscope

High Performance Computing Facilities



Melting Furnace



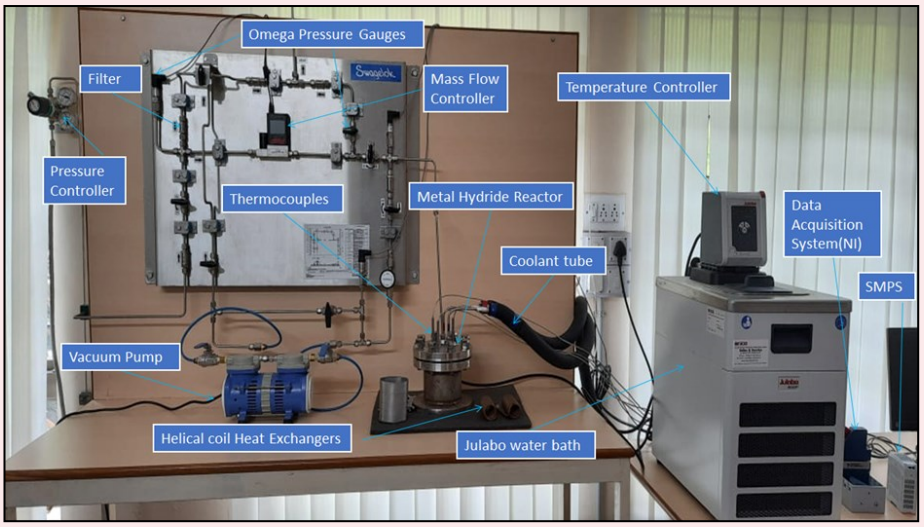


Shell and Tube Heat Exchanger

Concentric Tube Heat Exchanger

NEW RESEARCH FACILITIES INITIATED

- Metal Hydride Based Hydrogen Storage Experimental Setup
- Computerized Impact Testing Machine for Polymers and its Composites (with the motorized notch cutter)
- Shore-D Hardness Tester



Metal Hydride Based Hydrogen Storage Experimental Setup

Computerized Impact Testing Machine for Polymers and its Composites (with the motorized notch cutter)

Shore-D Hardness Tester

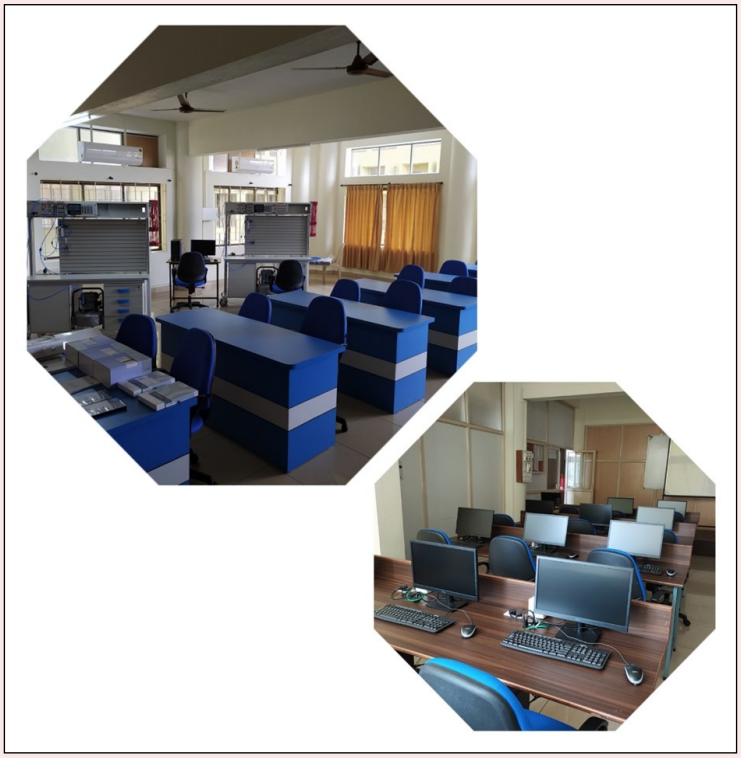
FESTO

Centre for Industrial Automation

FESTO Centre for Industrial Automation was established during the September 2020 to facilitate industry oriented hands-on training in the field of Industrial Automation / Mechatronics using appropriate equipment and simulation tools for the students, faculty, and working professionals from the Industry. The center will provide FESTO Didactic training solutions in the field of Pneumatics, Hydraulics, PLC, Factory Automation, Process Automation, etc.

FESTO Centre consists of:

Necessary Hardwares:
Mobile Workstation with two Drawer Unit (Double Sided)
Basic Pneumatic Training Kit
Add-On Basic Electro Pneumatic Training Kit
Add-On PLC Training Kit
Add-on EASYPORT training Kit
Text Books and Work books
Necessary Softwares:
FluidSim® Pneumatic simulation software (V5), ten network licenses
CIROS® Education software, five network licenses
Step 7 programming software, six licenses



FESTO Centre offers:

FESTO Certified internships, value added courses, projects, industrial visits, Participation in World Skills Competition, Technical Competitions and Hackathons.

Technical Articles

These six soft skills will quicken your way up the corporate ladder

A few years back we came across one of the clearest reasoning as to why companies interview prospective candidates. Under that barrage of questions fired during an interview, the evaluators surprisingly, seek answers to a couple of questions only:

Can they bear you?

Can you bear them?

As years passed by, we have realized just how important that word 'bear' has become. Earlier, interviews were all about knowing whether a specific candidate had the requisite technical skills. However, a shift towards team-based culture has forced organizations to emphasize on interpersonal skills of prospective employees. This has gone a long way in defining the overall 'work' culture within organizations. In today's times, it is essential for prospects to wield a strong interpersonal connect. Below we shall discuss some of the important interpersonal skills:

Communication skills

Communication remains the most essential skillset a professional should possess. Inefficient communication can cause escalation of avoidable issues and lead to friction within the team. While listening skills are easy to overlook, they form a precursor for successful application of communication skills. Verbal communication, through reading / writing / comprehension should project clarity in understanding of the issue at hand. Non-verbal communication like tone of voice and body language are much more subtle and can be a powerful tool as one grows in their profession. Successful professionals have mastered the art of using these skills simultaneously and in correct measure to put across their points.

Emotional quotient

While we aim to excel in a competitive environment, it is quintessential to manage one's emotions and be aware of other's emotions as well. A strong emotional quotient indicates a higher understanding of various perspectives. Such a professional will develop good relations with not only their team members but also their customers. In fact, in most customer-facing roles, emotional quotient can be a key differentiating factor between a great and an average service. It is no surprise then that managers with a higher emotional quotient tend to create happier teams.

Conflict management

While working in teams, it is common to have a difference of opinion. The key is to keep one's focus on finding win-win solutions rather than pulling down the other party. In such circumstances, the ability to mediate a dispute and bring about resolutions is essential. While resolving conflicts, one has to stay away from conflict amplifying factors and work towards an agreeable solution. One can engage any of the following conflict management styles for successful resolution – Integrating, Avoiding, Compromising, Collaborating and Dominating. While the first three styles are more docile and concerned with accepting the other party's line of thought, the remaining two are a shift towards being the aggressor and sticking to one's point of view. In the practical world, it would bode well to start with a more docile conflict resolution strategy before spending time and money that the dominating styles would demand in terms of – say, litigations.

Relationship building and management

How many of us are still in touch with our earliest managers? How many among us have a good rapport with every member of our team? With the professional world getting closer courtesy of LinkedIn, it is advisable to manage one's professional relationships well, especially with the mentors. At EDHEC, we always urge our students to nurture such relationships. Often, these connections provide vital push to one's career. Building the trust factor among clients and vendors takes time. Mind you, there is a difference between building relationships and managing them. While the former is an everyday task, the latter is a lifelong process which shall make one's career fruitful.

Self-confidence and influencing skills

Being self-confident helps one perform to the best of their abilities. This is an essential trait and professionals should nurture it. Self-confident professionals are quick learners, enterprising and risk-takers. They know exactly what they want from their careers and go about setting up themselves for higher challenges. Owing to their enterprising nature, they are good in influencing opposing parties to a mutually agreeable solution. Additionally, self-confident professionals make awesome mentors and are the first to help lagging teammates gain ground.

Work ethics

Organizations value integrity, honesty and discipline within prospective employees. These principles help build harmony and trust within the teams. In fact, teammates would be varying of those who do not follow such principles. Ensuring quality of work, timely project submissions, disciplined approach and respecting fellow colleagues remain some of the key positives followed by successful professionals. Such employees keep the larger picture in sight and work through cooperation to achieve it. This disciplined lifestyle rubs onto other team members, creating a strong bond within the team. Human Resources personnel view these professionals as an asset and role-models for the rest.

Coming back to importance of that word 'bear' mentioned earlier in the article, professionals should look at becoming an irreplaceable part of their teams. Technical expertise is of course essential but nurturing such an 'attitude' takes time. Interpersonal skills discussed above can help start the journey.

Reference: CNBC TV18.com

referred on October 29, 2019.

Dr Sudheer M

Professor and HOD

Fuel cells: Techno-Economic Challenges of Commercialisation

The increased pollution level, extreme climate changes, fossil fuel scarcity, and rapid economic growth demands a highly reliable, efficient, and environmentally friendly power production method. Fuel cell, an electrochemical device that directly converts chemical energy into electrical energy through a hydrogen oxidation and oxygen reduction reactions, is considered as an ideal alternative to the conventional Internal Combustion engine. The schematic diagram of a typical fuel cell is presented in Fig. 1. Since William Groove first invented the fuel cell in 1839, significant research and developments occurred in various aspects of its commercialization. In simple, fuel cell works like a battery, but does not run down or need charging. It can produce electricity continuously as long as fuel and oxygen are supplied. Fuel cell possesses several advantages over the other energy devices including broad fuel choices, quiet in operation as no moving parts involved, generate continuous electricity as long as the reactants are being replenished, high energy conversion efficiency, and environment friendly as no pollutant emission happens, as water is the only chemical as a by-product. It can be used for a wide range of applications, including transportation, material handling, stationary, portable and emergency backup power applications. However, as an emerging technology, significant market penetration of fuel cell has not yet been achieved due to several techno-economic challenges.

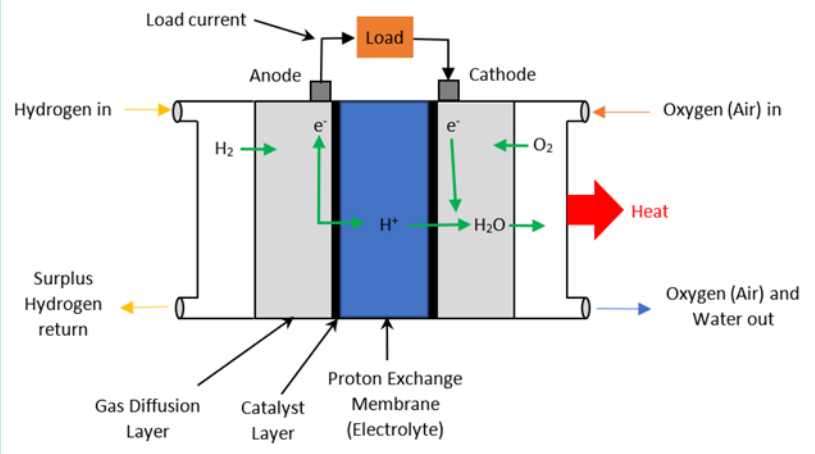


Figure .1 Schematic diagram of hydrogen-oxygen fuel cell.

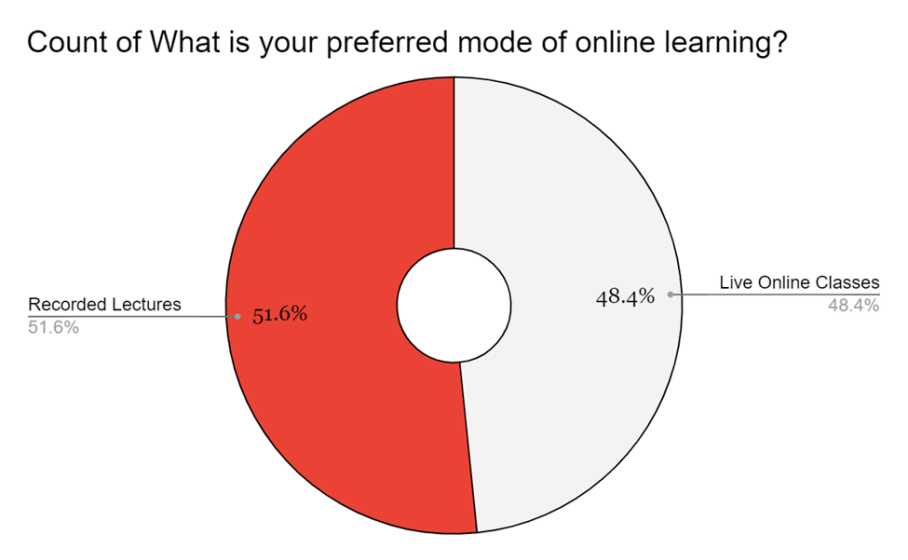
Dr Purushothama Chippar
Professor

The prime factors which hinder fuel cell's widespread commercialization are its cost, reliability, durability, and public awareness. To be straightforward, except in a few developed countries, the common public is not conscious of fuel cell technology and mostly its knowledge is limited to research laboratories. To enhance the primary end-user acceptance of this technology, a significant effort must be directed on its publicity and awareness on how fuel cells can play a key role in the future low-carbon green economy and sustainable development of economic growth. To be competitive on capital cost, fuel cell cost must be reduced by a factor of two, and stack cell life should be increased by a factor of two. However, operating costs will be still higher due to a lack of availability and storage infrastructure for hydrogen. Developing a low-cost hydrogen production, and efficient storage and transportation appear to be critical for the development of fuel cell powered vehicles. The use of hydrogen-rich on-board reformatted fuel is a viable option, however, degradation of the catalyst due to CO poisoning is a major concern. Several studies proposed the use of CO tolerant catalysts to address this issue. The individual fuel cells are stacked (i.e. repeat units) to achieve a higher voltage and power, and it is called a fuel cell stack. The failure of a single component could lead to failure of the whole stack, and the cost impact of maintenance and repairs will be very high. Another major concern for the deployment of fuel cell technology is its scaling-up approach that should be examined carefully to improve the reliability. A detailed study on the influence of various materials and catalysts on performance and durability of fuel cell is another important area should be focussed. All the stakeholders, including scientists, modelers, engineers, and designers must work together to address the technical issues, and Governments, investors, and funding agencies should support the technology integration and establish cohesive policy for the commercialization of fuel cells which would create low-carbon green economy and new business opportunities.

An online switchover: Pandemic Experiences

In March 2020, when a temporary break in classes was announced due to the COVID 19 pandemic, it was meant that things will be back to normal soon, and live classes will resume. Well, it is September now, and things are far from normal. The past six months have been quite an eventful journey. The teaching-learning process has changed considerably due to its complete online immersion. While some aspects of the teaching-learning process may assume normalcy post-pandemic, many aspects have been irrevocably altered, for the better. Changes in academic activities that were expected over the next five years, happened overnight! Technology now has a majority stake in the teaching-learning process and will continue to be so. This article summarizes the changes in pedagogy, tools, and mindset experienced by the author during the switchover to online classes.

One of the immediate concerns during the commencement of online classes was the access to quality internet connectivity for students. The mode of content delivery was dependent on this crucial factor. The decision to go in for live classes or rely on recorded lectures was also dependent on the connectivity. An initial survey on the students' preferred mode of online academic engagement revealed a near equal response for both live and recorded lectures, with a slight tilt towards recorded content. Based on the above response, the course on Design of Machine Elements - II, for which the author was the instructor for the VI Semester M2 section, was largely conducted using video lectures.



Dr Binu K G
Associate Professor

Figure. Online Live Classes Versus Recorded Video Lectures: Student Preference

The challenge, however, was to design effective video lectures that would evoke interest among the students and hold their attention for the duration of the lecture. As Cathy Moore says, "The most important principle for designing lively eLearning is to see eLearning design not as information design but as designing an experience." This change in mindset is critical in designing video lectures, where, each video lecture has a stand-alone learning objective. Looking back at the 40 video lectures that were prepared, the three-point mantra for designing a good video lecture is: 1) The video lecture should be of short duration 2) The video lecturer should be interactive and 3) Each video lecture should have a follow-up action.

Unlike the regular 1-hour lectures, online lectures should be of shorter duration. This is largely due to screen fatigue and the dwindling attention span of students. The live presence of a teacher, and her mannerisms in a classroom, serves as a point of focus for students, the absence of such a focal point is mighty distractive for students. The option of opening another tab, another window, will be too attractive to neglect! Hence, it is necessary for the video lectures to be short and impactful. The idea is to make the students watch multiple short videos, each of which has a clear learning objective.

The second important point is for the video lectures to be interactive. To hold the student's attention, it is important to provide her opportunity to participate during the video lecture. Many tools are available to make videos interactive. Edpuzzle is the author's personal favorite and considers it as truly a technological blessing for teachers. Heidi-Hayes Jacobs says quite rightly that "Teachers need to integrate technology seamlessly into the curriculum instead of viewing it as an add-on, an afterthought, or an event." Edpuzzle allows us to integrate questions that students could answer at multiple points through the video lecture. The expectation of a possible question to answer is a motivating factor for the student to be attentive. An additional important benefit of Edpuzzle is that it provides the much-needed feedback for teachers. While remote learning is largely bereft of timely feedback, Edpuzzle, allows the teachers to gain insights such as: 1) number of views of a particular video per student 2) Segments of a video that was viewed multiple times 2) Ability of students to answer the built-in questions within the video, and many more. This enables the teachers to: 1) Identify the messy points in the topic 2) Identify the attainment of learning objectives 3) Gather information on specific needs of students etc. This feedback will have a major impact on the quality of the teaching-learning process. An example of this data is shown below.

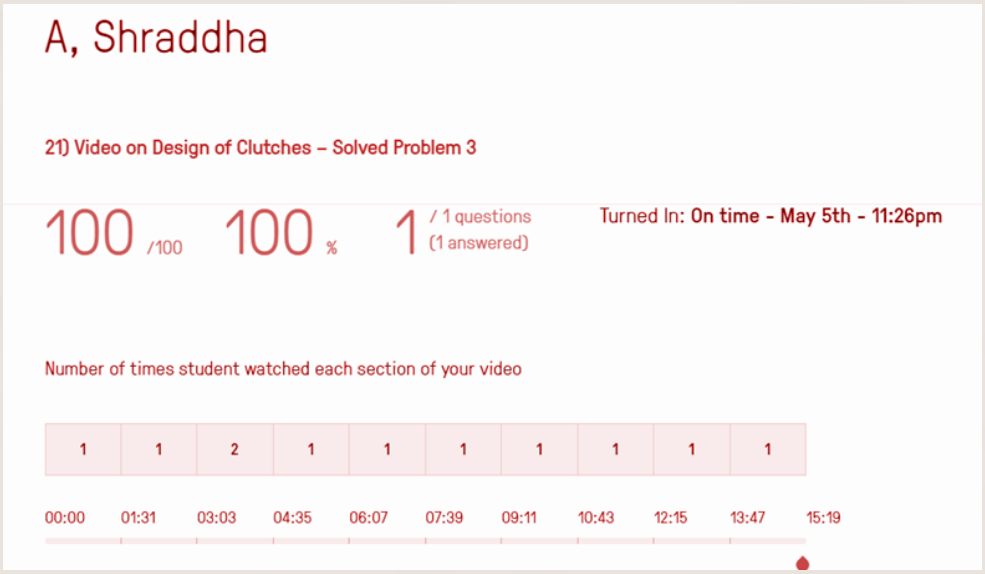


Figure A screenshot of Edpuzzle Student Activity.

The third important factor in the design of an effective video lecture is the follow-up. Relevance is the key! Information provided to students through the video should enable them to apply it somewhere! immediately! not just for exams! The content viewed in the video should help students do something specific! Let's say, a) Work on an assignment? b) Develop a mini-project? c) Answer a quiz successfully. etc. There should be a Follow-Up Action to perform after watching the video! This adds value to the video and it will resonate well with your students.

The whole process of daily video-lectures and their follow-up has revealed a few interesting points. Firstly, online mode has facilitated greater interaction with students compared to live classes. The veil of a computer screen has enabled the otherwise hesitant students to open up and come up with interesting questions. Secondly, the online mode of teaching allows us to integrate technology to improve students' visualization and understanding. The combined use of class notes, Edpuzzle videos, Quizzes, etc. was extremely well received by students. I consider it a wonderful break from the regular chalk and talk, PPTs to a more stimulating learning environment. Thirdly, this pandemic has broadened the learning horizons of both teachers and students. They have become more receptive to new technologies and concepts. The ease with which people are able to gain access to highly insightful webinars, online courses, etc. has taken learning to another level altogether.

This breakdown has also been a catalyst for enhanced online presence of Teachers. The YouTube Channel of a teacher has become a very important repertoire of learning content.

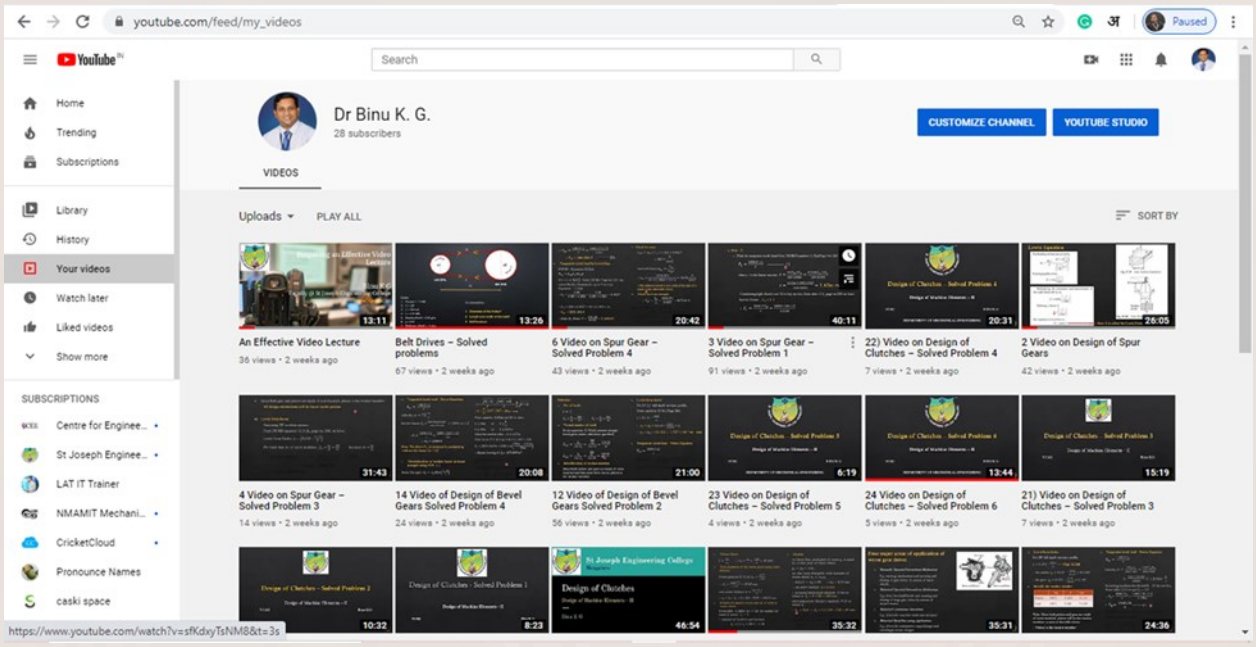


Figure. Screenshot of YouTube Video Library

The ability to share one's own learning content with the world in a few clicks has made the faculty look beyond institutions, universities, and even national boundaries. Multiple platforms have opened up to showcase innovative teaching methods to the world and opportunities for recognition and rewards are plenty. The opportunities to interact with great teachers across the world through webinars and other events has brought in a sense of confidence that, our teaching contents are on par with the best in the world. I will cherish the opportunity to listen to Dr. Richard Felder and Dr. Rebecca Brent through a webinar organized by UTM Malaysia during the lockdown period in June. Another important change brought about by this lockdown is the willingness of academicians to be receptive to cross-disciplinary information. The continuous webinars organized by Institutions across the world on various topics have brought together people from across disciplines leading to

Having said all this, there are plenty of challenges to surmount. While teaching-learning can continue online, live classes are essential for the all-round learning. There is no substitute for that. A blended model of learning, incorporating the best of both worlds is the way forward.




Karthik Anchan
VI Sem

Project Based Learning on Fin Designs using Modern Software Tool

Four final year students, namely, Alstan Preesal Lewis, Chirag Rai, Kartik S Kotian, and S Nagabhushan Shet under the guidance of Mr Joel D'Mello have taken up a case study on Fin Designs using modern software tool.

Basics of rocketry:

A model rocket is a down-scaled rocket used to understand the various forces acting on a rocket which operates in the range of earth's atmosphere; hence the air plays a significant role on the performance of the model rocket. A small gust of wind may cause the rocket to tilt slightly from its current orientation due to which the rocket centerline is no longer parallel to the velocity of the rocket. Fin is a component attached to the rocket body that produce lift or thrust, and provide stability during flight to allow the rocket to maintain its orientation and intended flight path. Stability can be achieved for a rocket if the Center of Pressure (CP) is behind the Center of Gravity (CG), near the aft. Fins are added to rockets so that the CP will be aft of CG.

Need for creative fins:

Fins are an integral part of a rocket that affects the performance of a rocket. For a good rocket performance, the rocket should have high stability, high apogee and less drag coefficient. So, creative fin designs are required to optimize the performance of the rocket from industrial fins.

Procedure:

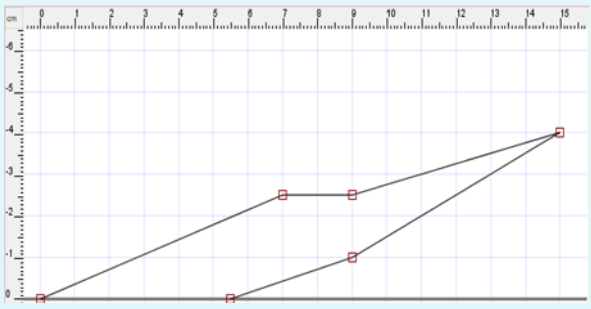
Using a software called OpenRocket, a rocket was designed from the components present in the database. A mass (24 g) is added to the nose and a motor called Estes B6-4 is used. The results from previous studies of industrial fins helped to determine a range for the creative fins to be designed. From previous studies, Triangular fin is seen the best fin while comparing with Rectangular, Parallelogram, Elliptical, Trapezoidal and Clipped Delta fins for same material of the fin (Balsa). The stability range was to be greater than or equal to 2.16, for drag coefficient, the range for 0.07 Mach speed for square, rounded and airfoil section was to be lesser than or equal to 0.45, 0.42 and 0.41 respectively and the range for 0.3 Mach speed for square, rounded and airfoil section was to be lesser than or equal to 0.49, 0.46 and 0.45 respectively. The results of all the creative fins analysis are noted (stability, apogee and drag coefficient).

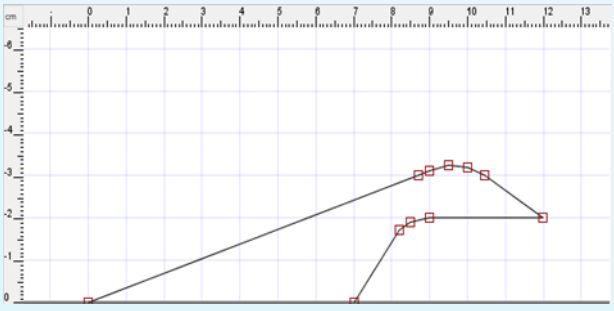
Results:

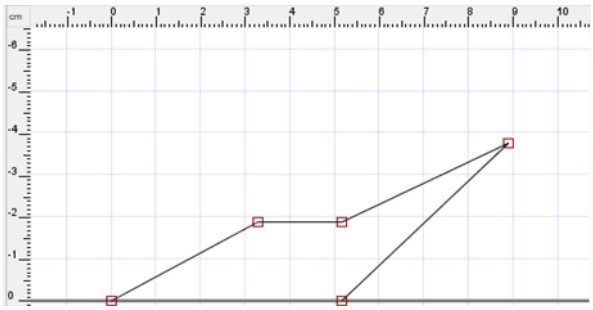
Comparison of results of creative fins with triangular fin:

Parameters	Cross sections	Triangular fin	Fin 1	Fin 2	Fin 3	Fin 4	Fin 5	Fin 6	Fin 7
Stability	Square	2.16	2.42	2.3	2.18	2.16	2.16	2.22	2.21
	Rounded	2.16	2.42	2.3	2.18	2.16	2.16	2.22	2.21
	Airfoil	2.18	2.44	2.32	2.19	2.18	2.17	2.23	2.23
Apogee	Square	43	43.5	44	44.4	44	43.4	43.3	44.8
	Rounded	43.6	44.2	44.4	45	44.5	44.6	45.7	45.4
	Airfoil	44	44.6	44.7	45.2	44.6	45.2	45.8	45.8
Drag coefficient (0.07 Mach)	Square	0.45	0.44	0.43	0.45	0.43	0.51	0.54	0.42
	Rounded	0.42	0.41	0.41	0.40	0.41	0.4	0.4	0.36
	Airfoil	0.41	0.40	0.40	0.39	0.40	0.39	0.39	0.36
Drag coefficient (0.3 Mach)	Square	0.49	0.48	0.47	0.49	0.47	0.55	0.59	0.44
	Rounded	0.46	0.45	0.44	0.44	0.44	0.44	0.44	0.38
	Airfoil	0.45	0.43	0.43	0.43	0.43	0.43	0.43	0.38

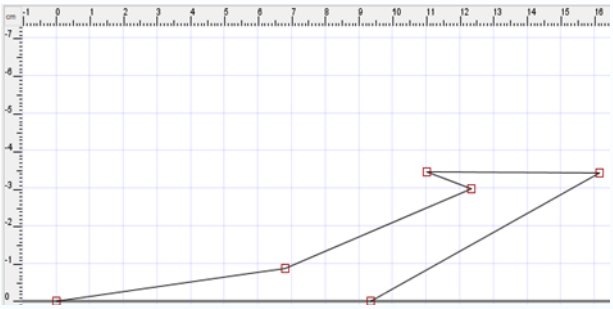
Creative fins:





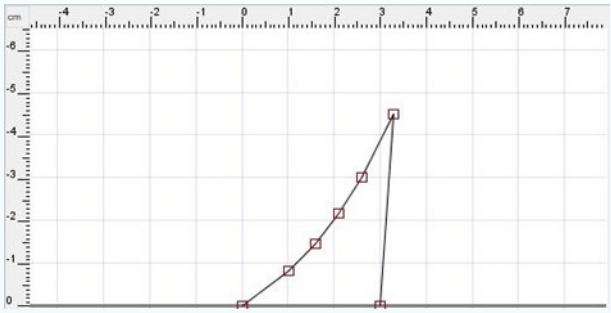


Fin 3

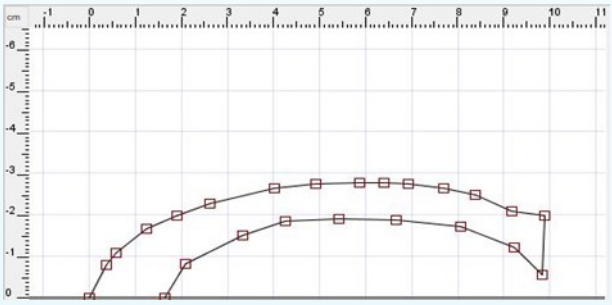


Fin 4

Fin 5



Fin 6



Fin 7

Mr Joel D'Mello
Assistant Professor

Conclusion:

After various studies, it was found that that the triangular fin with airfoil cross section was the best fin because it achieved maximum apogee and least drag coefficient compared to other fins. Now using the triangular fin as reference, we designed various fins which produces lesser drag and achieves a higher apogee than triangular fins. The only disadvantage of the creative fins impose would be that some of the fins would be complex to manufacture.

Why Mechanical Engineering?

If you're considering studying mechanical engineering at university or currently pursuing mechanical engineering but are yet to make your final decision or doubt your own decision, read on for some top benefits of studying mechanical engineering.

What is mechanical engineering?

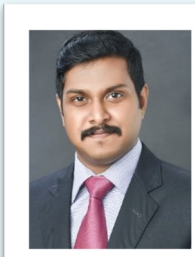
Mechanical engineering is a blend of mathematical principles, physical science and computing techniques. Mechanical engineers are responsible for building the world we live in. From the smallest nanotechnology techniques to largest constructions such as buildings, cars, and space stations, mechanical engineers are key in their design and development.

Why study mechanical engineering at university?

Mechanical engineering is the broadest of all engineering disciplines, allowing you an insight into the most diverse career choices. Unlike other degree programmes, mechanical engineering covers a wide-ranging syllabus, allowing you to learn a variety of skills that are relevant to many types of career opportunities. A qualified professional uses mathematical and physical science concepts into application to design anything requiring moving parts. This degree programme will likely involve modules in mathematical, physical science and design concepts learnt through laboratory projects, research, fieldwork, lectures and seminars.

Range of career options

Mechanical engineering is among the prime engineering fields. The graduate job market is known to be hard, but as mechanical engineers use maths and physics practices to design and produce the world's mechanical devices, graduates tend to be in high demand all around the world. Graduate prospects are therefore better than in most other industries, with most mechanical engineers securing employment soon after finishing university. As mechanical engineering is such a broad profession, you'll have plenty of job options available for you.



Mr Canute Sherwin
Assistant Professor

Pic Credit: https://adastra.fit.edu/blog/floridatechbound/consider-degree-in-mechanical-engineering/

The majority of graduates go into employment roles in mechanical engineering fields, for example:

- Core Mechanical Engineer Sector- Design, Analysis, Thermal, Production etc.
- Aerospace engineering sector
- Structural Engineering Sector
- Civil Engineering Sector

However, due to the diversity of their acquired skills, some graduates choose to move into other industries and roles. Some of these might include:

- Transport planner
- Electrical Planner
- Computer Numerical Control (CNC) Programmer
- Model Maker

Global opportunities

Mechanical engineers are in demand around the world. Every country needs these professionals to work on their society's many products and services. You could work on a railway project in China or on an oil rig in the North Sea. If travelling the world is a priority for you, or you've always wanted to live in a different country, a mechanical engineering degree could help get you there.

Forefront of future technologies

If you're excited by technology and technological advances, mechanical engineering could be the perfect career for you. Mechanical engineers lead on and develop new technologies, so you'll be at the heart of the process. The fast development of the technological

5G Technology

5G is the 5th generation mobile network. It is a new global wireless standard after 1G, 2G, 3G and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

5G wireless technology is meant to deliver higher multi-GBPS peak data speeds, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries.

Life will change with 5G and the anticipated application it will enable. There will be a growing divide of network connectivity and services between urban and rural areas because it is impractical to apply 5G everywhere right away.

The fundamental idea behind 5G is a single network that is flexible enough to handle a variety of different use cases. In order to deliver the promise of 5G, mobile network operators have to build a dense network with a massive amount of network nodes that will from the 5G infrastructure.

How are Indian operators preparing for 5G?

To explore how 5G networks will perform in the real world, and to gain experience in the building and operating them, India's network operators have applied to the government for permission to conduct field trials and selected one or more equipment vendors with which to collaborate. They are also enhancing their network cores to prepare for the additional traffic loads that 5G radio interfaces will carry.

Mr Gunakara
Lab Instructor

While 5G is built on the successes of 4G networks, it provides an opportunity for telecoms to move beyond providing connectivity services, to developing rich solutions and services for consumers, industries and infrastructure.

When 5G mobile network come to India, they will use a new radio technology and a different network architecture to deliver higher bandwidth and lower latency than 4G(LTE) and 3G networks we have today. 5G promises peak data speeds of up to 10Gbps-upto 100 times faster than 100Mbps of 4G.

India and Japan Tie-Up for 5G Technologies

Prime Minister Narendra Modi spoke to Japanese Prime Minister Yoshi hide Suga. The two leaders decided to take the bilateral special strategic and global partnership to a new level.

India and Japan have decided to join hands in technical development of 5G and 5G plus.

The whole aim of 5G network is to allow for more devices to be used by the consumer at faster rates than ever before; because of this goal there will certainly be an increase in energy usage globally.

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1. ತಂಪಾದ ರಾತ್ರಿಯಲಿ
ತಣ್ಣನೆ ಗಾಳಿಯಲಿ
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ತಿಳಿಯುವ ಕಾತರ ಅಪಾರ

Look at the sky
We are not alone
The whole Universe is
Friendly to us

2. ಮೂಡಣದಲ್ಲಿ ಸೂರ್ಯನ ಜನ
ಹಕ್ಕಿಗಳ ಚಿಲಿಪಿಲಿ ಗಾಯನ
ಶುರುವಾಯಿತು ನೇಸರನ ಪ್ರಯಣ
ಮೂಢಣದಿಂದ ಪಡುವಣ
ಮುಂಜಾನೆಯ ಬೆಳ್ಳಿ ಕಿರಣ
ತಲುಪಿತು ಮನೆಯ ಆವರಣ
ಏಳು ಮಗು ಏಳು ಬೆಳಗಾಯಿತು
ಬಾನಿನಲ್ಲಿ ರಂಗೇರಿತು
ಎದ್ದು ಶುಭ್ರವಾಗಿ ಮಿಂದು
ಕರವನು ಜೋಡಿಸಿ ನಿಂದು
ಪ್ರಾರ್ಥಿಸು ದೇವರಲ್ಲಿ ದಿನನಿತ್ಯ
ಬಳಿಕ ತೆರೆದು ಹೊತ್ತಗೆ
ಓದು ಪಾಠವನು ಮೆತ್ತಗೆ
ಕಾಫಿ ತಿಂಡಿ ಮುಗಿಸಿಕೊಂಡು
ಹೆಗಲಿಗೆ ಚೀಲ ಹಾಕಿಕೊಂಡು
ಗೆಳೆಯರ ಜೊತೆಗೆ
ಹೋಗು ನೀ ಶಾಲೆಗೆ

-ರಾಜೇಶ ಆಚಾರ್ಯ
ಲ್ಯಾಬ್ ಇನ್ಸ್ಟ್ರಕ್ಟರ್
ಯಾಂತ್ರಿಕ ವಿಭಾಗ
ಎಸ್.ಜೆ.ಇ.ಸಿ.

- Nanotechnology is a rapidly growing field which offers abundant opportunities for mechanical engineers.
- In years ahead, mechanical engineers are expected to be integral in using nanotechnology to develop advanced biomedical devices.
- Robotic process automation and robotics itself are the booming new trends.

Know Your Enemy

Can using a cell phone at a gas station lead to an Explosion? When sources tell you that the electromagnetic signals from your cell phone would be the reason, it hasn't been proved.

It has not been proved because it simply isn't true. There isn't a single confirmed case of this ever happening. Even a lit cigarette isn't hot enough to ignite petrol vapor. You need a naked flame or a spark, and mobile phones have low-voltage batteries that aren't capable of producing either. But what could lead up to the explosion is the involvement of Static Electricity. Static charges build-up due to an imbalance between negative and positive charges in an object. Until the charges find a way to discharge themselves they can build upon a surface.

What happens?

When you get out of the car to fuel your car, you slide across the seat and both you and the seat becomes charged. The seat here is positively charged because it loses electrons and our body here becomes negatively charged.

While getting out if you do not touch the metal surface like the top of your car or any metal part of the car body, you tend to carry the charges in you. Your body isn't dissipating the charges onto anything, not on to the metal surface nor the ground.

You touch the nozzle, here is your chance to discharge the charges; you will have to open the fuel cover which is again a metal, there is your chance again. You will also have to remove the fuel cap. By this time even your body would be nearly successful in discharging the charges.

The real problem occurs when you try to refuel or enter your car once again. Now that your nozzle is already inside the tank, you touch the nozzle. The gasoline is entering the tank, the vapors are coming out, and there is the air around you. All you need is a spark to ignite.

The static charges from your body are now dissipated into the nozzle which is surrounded by highly flammable vapor. Hence a spark and hence the ignition.

Now that there's a spark, we tend to pull the nozzle out which drops the gasoline onto the flammable environment and therefore there's major fire outburst and explosion.

How to prevent this?

Siya U Shetty
VI Sem

Ground yourself. Touch metal parts of your car to discharge the charges built up in your body.
Do not enter your car again to avoid building up charges. If you do, make sure you discharge yourself.
Wear shoes with conductive soles
Treat the car seats with fabric softener, which helps the seat eliminate static cling for few days.
In case of a spark, do not panic and pull the nozzle out of the tank. You will only be creating more fire.

But do not worry; you're far more likely to be struck by lightning than be a victim to Gas station explosion if you follow these rules strictly.

ANYTHING THAT MAKES YOU HAPPY!

One day I woke up and told myself that I didn't want to feel miserable anymore. I have certainly seen better days. I know I do not have everything that I want but I surely have everything that I need. I woke up with some pains and aches but eventually I did wake up. That day I chose myself and that day I chose happiness. Happiness for me comes with acceptance, the kind that rings through my bones and shuts the voice inside my mind that says, "I am not enough". I know sometimes it doesn't feel like. Sometimes it can be difficult for me to navigate from where I am. The sun of my wholeness can be covered with clouds, but it is never gone. And to realise that it'll take everything I've got, every ounce of compassion courage and spirit that I possess. And because it takes everything that I've got, it'll show me everything that I am. That day it'll make me believe that I can be corrected, dented, shaped but I cannot be broken because that is not what I've decided to be within. I cannot be thrown away like a bad piece of fruit because I am much bigger than the parts I play and to love and accept those parts which no one claps for, that is my definition of happiness. That day I told myself I am not my name, not my grades, not my hair nor my skin but I am all the words I speak, all the books I read, all the places I've been to, all the things I believe in and all the future I dream of.

All our life we chase happiness. Why don't we stop chasing and start living? Stop expecting our Mondays were our Saturdays and start living the days as they come. We could do new things, get excited, make a change, burn with the inner fire of unbreakable will, trust ourselves and stop building homes at temporary places. Let's tuck in the beautiful memories and revisit them when things get rough. I know it can be hard sometimes and when it is, let's remind ourselves of all the languages we wanted to learn, the places we wanted to visit, the food we wanted to taste, anything that makes us happy!

Ms Sharadhi
IV Sem

- ಶರತ್ ಕುಮಾರ್ ಎಸ್ ಎಂ
6th sem ಮೆಕ್ಯಾನಿಕಲ್

ಎಸ್ ಜೆ ಇ ಸಿ ಯಾ... ಸೊಬಗು..
ನಾ ಕಂಡ ಮಂಗಳೂರು ಸಮೀಪದ ವಾಮಂಜೂರು
ನಡುವೆ ಸಂತ ಜೋಸೆಫರ ಜ್ಞಾನದ ತವರೂರು
ಹೊರ ನೋಟದಿ ಕಾಣುವುದು ಹಸಿರಿನ ವನ
ಒಳ ನಡುಗೆಯಲೆ ಬರುವುದು ಅರಮನೆಯ ಸಿರಿತನ..
ಆಯಾಸಿದರೆ ವಿಶ್ರಾಂತಿಯಾ ಧಾಮ ಹರ್ಷವಾದರೆ ಆಟದ ಮೈದಾನ
ನೋವಿದ್ದರೆ ತಂಗಾಳಿಯೇ ಹಾಡುವುದು ಗಾನ
ಸುಮ್ಮನೆ ಕುಂತು ನೋಡಿದರೆ ಮೈಮರೆಸುವ ಸುಂದರ ವಾತಾವರಣ...
ನಡೆದಾಡುವಾಗ ಸ್ವಾಗತಿಸುವುದು ಪಕ್ಷಿಗಳ ಸಂಕುಲನಾ
ಪ್ರತಿ ವಿಷಯಗಳಿಗೂ ಅವಕಾಶಗಳ ವರಮಾನ
ಪ್ರತಿ ತಿಂಗಳು ಹೊಸ ವರ್ಷದ ಹಬ್ಬದ ಸಮ್ಮಿಲನ
ಹೆಚ್ಚಿಸುವ ಜ್ಞಾನ ಜೊತೆಗೆ ಶಿಸ್ತು ಬದ್ಧ ಜೀವನ
ಪುಣ್ಯವ ಮಾಡಿರಲು ಈ ಜಾಗಕ್ಕೆ ಮುಡಿಪು ನನ್ನಿ ಯೌವ್ವನ
ಹೇಳುತ್ತಿರುವುದು ಈ ಮಾತು ಇಲ್ಲಿರುವ ಪ್ರತಿಯೊಬ್ಬರ ಮನ ಮನ ...
ನಡೆ ನಡೆಗೂ ಸ್ಫೂರ್ತಿ ತುಂಬುವ ಸೂಚನಾ ಫಲಕ
ಪ್ರತಿ ನಿತ್ಯವೂ ಸ್ವಚ್ಛ ಶುಭ್ರತೆಯ ಹೊಳಪು ಲಕಲಕ..
ಶಿಕ್ಷಕರು ವಿಷಯ ತಿಳಿಸುವ ಹಂಬಲದಲಿ ಅವನೊಬ್ಬ ನಾವಿಕ
ನಮ್ಮನ್ನು ಗೆಲ್ಲಿಸುವ ಅವನ ತವಕ
ನಮ್ಮ ಸಾಧನೆಯಲಿ ಖುಷಿ ಪಡೊ ನಿಸ್ವಾರ್ಥದ ಶಿಕ್ಷಕ..
ಈ ಸುಂದರ ದೃಶ್ಯ ನೋಡಿದರೆ ಎಂಥ ಮೂರ್ಖನು ಆಗುವ ಒಮ್ಮೆ ಲೇಖಕ...

As Time Goes By

Hello everyone! At some point in our life, we all have missed our school days. So I have written something about it. Hope you enjoy it.

Didn't know anyone during the first day of school
But as time passed our bond was strong as a molecule
Be it summer, winter or rainy season
Arguments, fights for no reason
Waiting for teachers to have no duty
Was the time when we used to run for PT
A lot of teachers we used to mock
But they always guided us with the help of a chalk
To be the class monitor was our aim
But while monitoring, we never wrote our friends name
Eagerly waiting for the period to end
To go and distribute birthday chocolates with our best friend
From sharing lunch to sharing a secret
To listen to our teacher say,"Is this a fish market?"
Getting scared to collect the answer sheet
Because soon, there would be a parent-teacher meet
Teachers used to ask for homework with a scary look
If the homework was incomplete,"Oh! I forgot the book"
Hand cricket, red hand, truth or dare
If the teacher caught us she would never spare
Feeling sad when your friend was sent to another section
But no worries as we had a strong connection
The farewell was the last time when we all met
Now we just keep in touch using the internet.

Mr Sidhanth Kamath M
IV Sem
https://www.sidhanthkm.com/

Prototypes – Cardboard Prototyping

• **What is a Prototype? :-** A Prototype is a rudimentary working sample, model, mock-up or just a simulation of the actual product based on which the other forms are developed. The main motive behind prototyping is to replicate the design of the original product. Creating a Prototype is also called as Materialization. It is also the first step of Transforming the virtual or conceptualized design into the real physical form.

Advantages of Prototypes:

- Reduced time and cost.
- Improves the Quality of the Specifications and Requirements Provided to customers.
- Customers cannot anticipate higher costs.
- Fatigue, errors and Failures can be found out. Modification can be done, to result in a better end product.

Types of Prototypes:

1. **Paper Prototype**:- A paper Prototype is an example of throw away Prototype. It is basically rough or Handsketched drawings of the product.
2. **3D Print**:- It's the latest technology where 3D version of a product can be printed. Limited number of quantities can be made.
3. **Digital Prototype**:-A digital prototype is where the product can be created virtually using softwares like Catia etc, Designing can be done here. It's the primary step of a Prototype.
4. **Scale model :-** It is a small/ miniature version of the actual model commonly used for prototyping large products like Buildings, Automobiles etc.

Cardboard Prototyping:

Cardboard Prototyping refers to Prototyping of 3D mock-ups of almost any physical object or Environment out of Cardboard. Cardboard Prototypes are used in doing miniature models.

This is a Cardboard Protype Which I did using carboard, this a Protype of a F1 car , so here are the Steps taken to do it.

First Draw the rough outline of the base on a Cardboard. This is actually called the Bargeboard of the Car.

Now taking the barge board as reference, draw all parts and then cut it, each part has to be measured properly to get a good model, after doing all the parts step by step the next step is assembly.

This is how it looks after assembling, have to be really careful at the time of sticking it.

This is how the End Product will look after Paint and Graphic works. This is a Prototype of a F1 car “Scuderia Toro Rosso”.

This is how I did a Cardboard prototype of a F1 car.

Jithesh Salian
IV Sem M2

Aaron D’Souza
VII Sem

ತಡೆ ಓಟ (ಹರ್ಡಲ್ಸ್) ಜಯಿಸಿದವರು

ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ ದಾಟಿ ಪಿಯುಸಿ ಆರ್ಟ್ಸ್(ಕಲೆ) ವಿಭಾಗದಲ್ಲಿ ಪ್ರವೇಶ ಸಿಕ್ಕ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅಧ್ಯಾಪಕರು ಕೇಳಿದ ಒಂದು ಪ್ರಶ್ನೆ ಹೀಗಿತ್ತು. ನೀವು ವಿಜ್ಞಾನ ಅಥವಾ ವಾಣಿಜ್ಯ ವಿಭಾಗ ಬಿಟ್ಟು ಆರ್ಟ್ಸ್(ಕಲೆ) ವಿಭಾಗ ಆರಿಸಲು ಕಾರಣವೇನು? ಮುಂದಿನ ಬೆಂಚಿನ ವಿದ್ಯಾರ್ಥಿಯ ಉತ್ತರ ಹೀಗಿತ್ತು. ಪಾಸದದ್ದು ಜನತಾ ಕ್ಲಾಸ್ ಮನೆಯಲ್ಲಿ ದುಬಾರಿ ಫೀಸ್ ಕಟ್ಟಲು ಅನುಕೂಲವಿಲ್ಲ. ಬೇರೆ ಕೋರ್ಸ್‌ಗಳಿಗೆ ಬೇರೆ ಕೋರ್ಸ್‌ಗಳಿಗೆ ಸೀಟು ಸಿಗುವ ಛಾನ್ಸ್ ಇಲ್ಲ. ಅದಕ್ಕಾಗಿಯೇ ಆರ್ಟ್ಸ್ ವಿಭಾಗಕ್ಕೆ ಬಂದೆ. ಇನ್ನೊಬ್ಬ ಉತ್ತರಿಸಿದ್ದು ಹೀಗೆ. ದುಂಬಾಲು ಬಿದ್ದು ಪ್ರಾರ್ಥಿಸಿದರೂ ವಾಣಿಜ್ಯ ವಿಭಾಗಕ್ಕೆ ಸೀಟು ಸಿಗಲಿಲ್ಲ. ಅದಕ್ಕೇ ಬೇರೆ ದಾರಿಯಿಲ್ಲದೆ ಡಿಗ್ರಿ ಮಾಡಲೇಬೇಕೆಂದುಕೊಂಡು ಇಲ್ಲಿ ಪಿಯುಸಿ ಆರ್ಟ್ಸ್ ವಿಭಾಗಕ್ಕೆ ಸೇರಿದೆ. ಹೀಗೆ ವಿದ್ಯಾರ್ಥಿಗಳಿಂದ ಹತ್ತು ಹಲವು ಉತ್ತರಗಳು ಲಭಿಸಿದವು. ಆಗ ಅಧ್ಯಾಪಕರು ಕೊಟ್ಟ ಸ್ವಾರಸ್ಯಕರವಾಗಿತ್ತು. ನಮ್ಮನ್ನು ಆಳುವ ಸಂಸದರು, ಶಾಸಕರು ಹೆಚ್ಚಿನವರು ಆರ್ಟ್ಸ್ ವಿಭಾಗದ ಪದವಿಧರರು. ಅಷ್ಟೇ ಏಕೆ ಡಿಸ್ಟ್ರಿಕ್ಟ್, ಹೈಕೋರ್ಟ್ , ಸುಪ್ರೀಂ ಕೋರ್ಟಿನ ನ್ಯಾಯಾಧೀಶರು, ನ್ಯಾಯವಾದಿಗಳು ಕೂಡ ಇದೇ ಆರ್ಟ್ಸ್ ವಿಭಾಗದ ಪದವಿ ಪಡೆದು ಹೆಚ್ಚಿನ ವ್ಯಾಸಾಂಗ ಮಾಡಿದವರು ಎಂದು ಆರ್ಟ್ಸ್ ವಿಭಾಗದ ಹಿರಿಮೆ ಕೊಂಡಾಡಿದಾಗ ಮಾತ್ರ ವಿದ್ಯಾರ್ಥಿಗಳು ಆಶ್ಚರ್ಯಚಕಿತರಾದರು.

ಇದೇ ರೀತಿ ತಾಂತ್ರಿಕ ಶಿಕ್ಷಣದಲ್ಲೂ ಆಗುವುದುಂಟು. ಸಿ.ಇ.ಟಿ ರ್ಯಾಂಕಿಂಗ್‌ನಲ್ಲಿ ಇವತ್ತು ಸಾವಿರಕ್ಕಿಂತ ಹೆಚ್ಚು ಹಿಂದೆ ಇದ್ದವರಿಗೆ ಸಿಎಸ್, ಇಸಿ ಅಥವಾ ಇ ಎಂಡ್ ಇ ವಿಭಾಗಗಳಿಗೆ ಸೀಟು ದಕ್ಕುವುದು ಬಹಳ ಕಡಿಮೆ. ಅದೂ ಪ್ರತಿಷ್ಠಿತ ಕಾಲೇಜಿನಲ್ಲಂತೂ ಸಿಗುವುದೇ ದುಸ್ತರ. ಹೀಗಿರುವುದರಿಂದ ಮ್ಯಾನೇಜ್‌ಮೆಂಟ್ ಸೀಟು ದುಬಾರಿಯಾಗಿರುವುದರಿಂದ ಕೊನೆಗೆ ಆರಿಸುವುದು ಸಿವಿಲ್ ಇಂಜಿನಿಯರಿಂಗ್ ಅಥವಾ ಮೆಕ್ಯಾನಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್. ಹಾಗೂ ಹೀಗೂ ಹೇಗೂ ಅಂತಿಮ ವರ್ಷದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಎಲ್ಲಿ ಕೆಲಸವೋ ಎಂದು ಪ್ಲೇಸ್ಮೆಂಟ್ ವಿಭಾಗಕ್ಕೆ ಅಲೆದಾಟ. ಕೊನೆಗೆ ಉನ್ನತ ದರ್ಜೆಯಲ್ಲಿ ಉತೀರ್ಣರಾದವರಿಗೂ ಉದ್ಯೋಗ ಸಿಗದೆ ನಿರಾಶೆ. ಎಲ್ಲಿ ಹೋಗಲಿ ಎಲ್ಲಿ ಸೇರಲಿ ಎಂದು ಕಾಲೇಜು ಮುಗಿಸಿ ಹೊರ ಬಂದಾಗಲೇ ಅರಿವಿಗೆ ಬರುವುದು ಜಗತ್ತಿನ ಮೂಲೆ ಮೂಲೆಯಲ್ಲಿಯೂ ಮೆಕ್ಯಾನಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್‌ಗೆ ಅವಕಾಶಗಳ ಭಂಡಾರವೇ ತೆರೆದಿದೆಯೆಂದು. ಹೀಗಿರುವಾಗ ಹಲವಾರು ಮಂದಿ ಉದ್ಯೋಗ ಅಥವಾ ತಿಂಗಳಿಗೆ ಆರಂಕಿ ಸಂಬಳ ಸಿಗಬೇಕೆಂಬ ಹಂಬಲವಿರುತ್ತದೆ. ಅಂಥಹ ಅವಕಾಶವೂ ಹಲವರಿಗೆ ಒದಗುವುದುಂಟು.

ಮೆಕ್ಯಾನಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ ಪಾಸಾದವರಿಗೆ ಒಂದು ಕನಸು ಇರುತ್ತದೆ. ನಾನು ಏನನ್ನಾದರೂ ಸಾಧಿಸಬೇಕು, ಅಡೆತಡೆಗಳನ್ನು ಎದುರಿಸಿ ಈಗಿರುವ ಸಾಧನಗಳ ಹೊಸ ಸುಧಾರಿತ ಅವಿಷ್ಕಾರ ಮಾಡಬೇಕು. ನನ್ನಿಂದಾಗಿ ಹತ್ತು ಹಲವು ಮಂದಿಗೆ ಉದ್ಯೋಗ ದೊರೆತು ಅವರ ಮನೆಯ ಬೆಳಕಾಗಬೇಕು. ಇಂಥ ಕನಸು ಕಂಡ ನಮ್ಮ ಮೆಕ್ಯಾನಿಕಲ್ ವಿಭಾಗದಲ್ಲಿ ಕಲಿತ ನಮ್ಮ ಕಾಲೇಜಿನ ಹತ್ತು ಹಲವು ಹಳೇ ವಿದ್ಯಾರ್ಥಿಗಳು ಗೆಲುವು ಸಾಧಿಸಿದವರಿದ್ದಾರೆ. ಇಂದು ಅವರ ಪ್ರತಿಭೆ ತಮ್ಮ ಪರಿಸರದ ವರ್ತುಲದಲ್ಲಿ ಜ್ವಾಜಲ್ಯಮಾನವಾಗಿದೆ. ಇಂಥ ಕೆಲವರ ಕಿರು ಪರಿಚಯ ಇಲ್ಲಿ ಕೊಡುತ್ತಾ ಇದ್ದೇನೆ.

1. **ಜಾನ್ ರೊಡ್ರಿಗಸ್:** ಇವರು ರೋಬೋಟ್ ತಯಾರಿಯಲ್ಲಿ ನಿಸ್ಸೀಮರು. ಇವರು ತಯಾರಿಸಿದ ಕಾಫೀ ಬೋಟ್‌ನ ಪ್ರಾತ್ಯಕ್ಷಿತೆಯನ್ನು ಕಾಲೇಜಿನಲ್ಲಿ ಪ್ರದರ್ಶಿಸಿದ್ದಾರೆ. ಮುಂದೆ ಇಂಥವುಗಳನ್ನು ಅತ್ಯಾಧುನಿಕ ರೀತಿಯಲ್ಲಿ ತಯಾರಿಸುವ ಹಂಬಲದಲ್ಲಿದ್ದಾರೆ. ಇದಕ್ಕಾಗಿಯೇ ಹೆಚ್ಚಿನ ತಂತ್ರಜ್ಞಾನದ ಪರಿಣತಿ ಪಡೆಯಲು ಕಲಿಕೆಗಾಗಿ ವಿದೇಶಕ್ಕೆ ತೆರಳಿದ್ದಾರೆ.

2. **ಅಲನ್ ಜೋಯೆಲ್:** ಇವರು ಭಾರತೀಯ ನೌಕಾಪಡೆಯ ಪ್ರತಿಭಾವಂತ ಯೋಧ. ಪ್ರಸ್ತುತ ಇವರು ನೌಕಾಪಡೆಯ ಫೈಟರ್ ಹುದ್ದೆಯಲ್ಲಿದ್ದಾರೆ. ಬೆಂಗಳೂರಿನಿಂದ ನೌಕಾಪಡೆಯ ಸಾಗರ ಮಧ್ಯೆ ಇರುವ ನೌಕೆಗಳಿಗೆ ರಕ್ಷಣಾ ಸಾಮಾಗ್ರಿಗಳನ್ನು ವಾಯು ಮಾರ್ಗದಲ್ಲಿ ತಲುಪಿಸುವ ಕಾರ್ಯನಿರ್ವಹಿಸುತಿದ್ದಾರೆ.

3. **ಹರ್ಷಿತ್:** ಇವರು ಭಾರತದ ಆರ್ಮಿಯ ಅಧಿಕಾರಿ ವರ್ಗದಲ್ಲಿದ್ದಾರೆ. ಪ್ರಸ್ತುತ ಆರ್ಮಿಗೆ ಸಂಬಂಧಿಸಿದ ಉಪಕರಣಗಳ ಗುಣಮಟ್ಟ ಪರೀಕ್ಷಿಸಿ ಸೇನೆಯ ಆಯಾ ವಿಭಾಗಗಳಿಗೆ ತಲುಪಿಸುವ ಕೆಲಸವನ್ನು ಅವರು ನಿರ್ವಹಿಸುತ್ತಾ ಇದ್ದಾರೆ.

4. **ಜಾಕ್‌ಸನ್ ನೊರೋನ್ಹ:** ಇವರು ಒಂದು ಮ್ಯಾನುಫ್ಯಾಕ್ಚರಿಂಗ್ ಕಂಪನಿ ನಡೆಸುತ್ತಾ ಇದ್ದಾರೆ. ಕೊಂಪೋನೆಂಟ್ ಮ್ಯಾನುಫ್ಯಾಕ್ಚರಿಂಗ್ ಕೆಲಸ ಇಲ್ಲಿ ನಡೆಯುತ್ತದೆ. ಗಣಕೀಕೃತ ಯಂತ್ರದಿಂದ ಉತ್ಕೃಷ್ಟ ದರ್ಜೆಯ ಬಿಡಿಭಾಗಗಳನ್ನು ಉತ್ಪಾದಿಸುವ ಘಟಕ ಇದು.

5. **ಫ್ರೀತಂ ಪ್ರಿನ್ಸ್ ಪಿಂಟೋ:** ಇವರೊದೊಂದು ವಿಶಿಷ್ಟ ಸಾಧನೆ. ಡೆಲಿವರಿ ಸರ್ವಿಸಸ್ ಉದ್ಯಮ ನಡೆಸುತ್ತಿದ್ದಾರೆ. ಈಗಾಗಲೇ ಅವರು 40,000ದಷ್ಟು ಗ್ರಾಹಕರನ್ನು ಹೊಂದಿರುತ್ತಾರೆ. ಗೃಹಪಯೋಗಿ ವಸ್ತುಗಳನ್ನು ಕ್ಲಪ್ತ ಸಮಯದಲ್ಲಿ ಅವರವರ ಮನೆಗಳಿಗೆ ತಲುಪಿಸುವ ಕೆಲಸ ಮಾಡುತ್ತಿದ್ದಾರೆ. ಈ ಕೋವಿಡ್ ಸಮಯದಲ್ಲೂ ಲಾಭದಾಯಕವಾಗಿ ಯಶಸ್ಸನ್ನು ಕಂಡಿದ್ದಾರೆ. ವಿದೇಶದ ಸರ್ವಿಸ್‌ಗೂ ಪರವಾನಗಿ ಹೊಂದಿದ್ದಾರೆ.

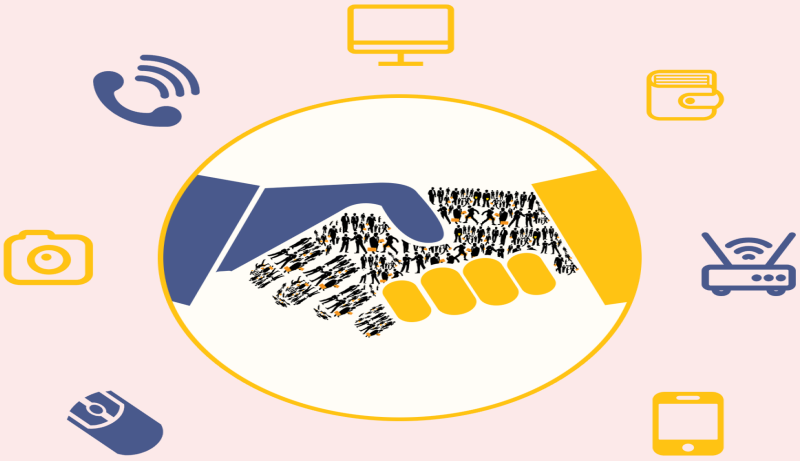
6. **ಅನಂತ್ ಮಲ್ಯ:** ಶ್ರೀರಾಮ್ ಸೋಪ್ಸ್ ಇದರ ಮಾಲಕ. ಸೋಪ್ ತಯಾರಿಸುವ ಹಲವಾರು ಕಂಪೆನಿಗಳಿವೆ. ಆದರೆ ಇವರು ತಯಾರಿಸುವುದು ಸಾಮಾನ್ಯ ವಿಧಾನದ ಉತ್ಪಾದನೆಯಲ್ಲ. ಇವರು ಉತ್ಕೃಷ್ಟ ದರ್ಜೆಯ ಡಿಟರ್ಜೆಂಟ್ ಲಿಕ್ವಿಡ್ ಸೋಲ್ಯೂಷನ್ ತಯಾರಿಸುತ್ತಿದ್ದಾರೆ.

7. **ವಿಯೋನ್ ಜೋಸೆಫ್ ಮಾರ್ಟಿನ್:** ಇವರದು ಆಟೋಮೇಷನ್ ಸರ್ವಿಸಸ್. ಎರ್ಗಂಡೀಷನ್ ಸೋಲ್ಯೂಷನ್, ಸೆಕ್ಯೂರಿಟಿ ಸೋಲ್ಯೂಷನ್ಸ್ ಇವರ ಕಂಪೆನಿಯ ಪ್ರಮುಖ ಉತ್ಪಾದನೆಗಳು.

ಕೆಲಸ ಸಿಕ್ಕಿಲ್ಲ ಎಂದು ವ್ಯಥೆಪಡುವ ಪ್ರಮೇಯವು ಮೆಕ್ಯಾನಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ ಮುಗಿಸಿದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಖಂಡಿತ ಬರಲಾರದು. ವಿಶ್ವದೆಲ್ಲೆಡೆ ತಿಣುಕಿ ನೋಡಿದರೆ ಮೆಕ್ಯಾನಿಕಲ್ ವಿಭಾಗದಲ್ಲಿನ ಅವಶ್ಯಕತೆಗಳು ಅನಂತವಾಗಿವೆ. ಇವುಗಳನ್ನು ನಮ್ಮ ಅವಶ್ಯಕತೆಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಉಪಯೋಗಿಸಿದರೆ ಖಂಡಿತವಾಗಿಯೂ ಜಯ ನಮ್ಮದು.

– ಚಾರ್ಲ್ಸ್ ಫೆರ್ನಾಂಡಿಸ್
ಪರಿಚಾರಕರು
ಯಾಂತ್ರಿಕ ವಿಭಾಗ

ALUMNI INTERACTION



Message:

"While being an alumnus and a privileged alumni coordinator in the Department of Mechanical engineering, SJEC since 2018, I strongly believe that the growth and success of an Institution can be accomplished through the contribution by the alumni to the Department in numerous ways. Getting in touch with the favorite faculty itself is a booster for the gratitude shown by the alumni to our department. It is of my personal opinion that Visiting the Alma Mater at least once a year is equivalent to paying respect to this great institution enthralled with its faculty. Feedback from the alumni is a vital factor to facilitate continuous improvement in academics and Co-curricular activities. There will obviously be linger good/bad memories throughout the experience in the institution, but growth and development is a continuous learning process."

Mr. Vinoothan Kaliveer

Alumni Coordinator 2019-20

Alumni Interaction

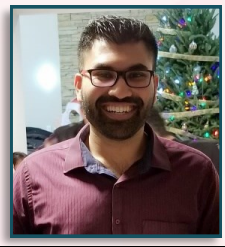
Dr Vijeesh Vijayan
Associate Professor
Mechanical Engg, NMAMIT Nitte
Class of 2007
Email: vijeeshv@nitte.edu.in

Dr Vijeesh Vijayan, alumnus of 2007 batch, presently working as Associate Professor in the Department of Mechanical Engineering, NMAMIT Nitte delivered a talk on "Challenges and advances in resistance spot welding of advanced high strength steels and aluminium alloys for future electric car vehicles" for the III semester students of Mechanical Engineering on 17 Oct 2020 at 3:00 pm in the Prerana Hall. During presentation, speaker mentioned about the basics of resistance spot welding, influencing factors and challenges in welding advanced high strength steels and aluminum alloys.

Dr Vijeesh Vijayan gave a glimpse of the Welding research lab set up by him at NITTE and various research activities going on as on date. Speaker also briefed about the industrial consultancy projects taken up at his welding research lab. As our proud alumni, Dr Vijeesh Vijayan interacted with the students and shared sweet memories of his student life at SJEC during 2003-2007. He requested the students to attend the classes regularly and have the strong foundation in subjects.

Dr Vijeesh appreciated the infrastructure and the growth the SJEC has shown in the last one decade. SAE-SJEC team members have also interacted with speaker to get the solution to their specific problems which they used to encounter during the welding of ATV vehicles for BAJA competition. Dr Vijeesh Vijayan invited all to visit his research lab at NMAMIT Nitte. SJEC wishes him all the best in all his future endeavors.

Alumni Interaction



Mr Aston D'Souza
Product Development Engineer
FORD, US
Class of 2013

Mr Aston D'Souza, Product Development Engineer, Ford – US delivered a talk on "A Journey into the Real World" for IV sem students 0n 20 Feb 2020 at 11:00am in Bishop Aloysius Paul Hall. During presentation, speaker mentioned about the design evolution, modern manufacturing, automation and the future. Mr Aston D'Souza gave a glimpse of the projects where he used microcontroller like Arduino Uno to perform simple task when he was studying in 2nd year engineering. Speaker also briefed about the simple automation projects taken up at his research lab like tiny weather forecast for his aunt and manufacturing of components for tiny weather forecast by additive manufacturing at his lab.

As our proud alumni, Mr Aston D'Souza interacted with the students and shared sweet memories of his student life at SJEC during 2009-2013. He requested the students to attend the classes regularly and have the strong foundation in subjects.

Industry/Alumni Online Interaction - Mindshare on Challenges and Preparedness for Post - COVID Scenario - Perspectives from both Industry and Educational System

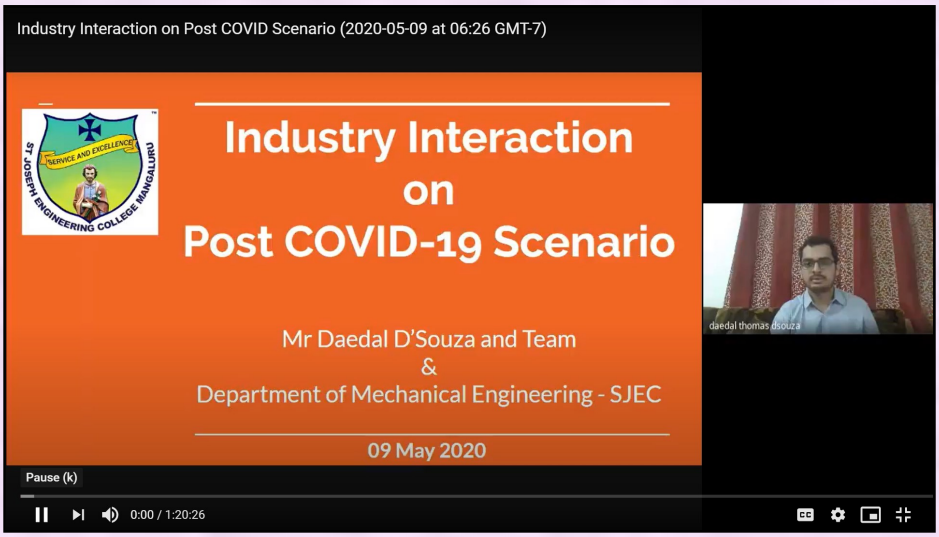
The mindshare session began with a discussion on the impact of COVID-19 pandemic on the Industry. The impact was looked at from the perspectives of economical, psychological, health and social impact. The automobile and aerospace industries and the manufacturing sector have seen considerable impact. While the auto industry is looking at cost reduction, the aviation and tourism industry has been severely impacted. It is estimated that at least a year's duration is required for tourism to pick up. Mechanical Engineering industries, usually a case where work from home is not an option, are finding out means of doing it.

The absence of policies regarding online teaching-learning, the issues related to internet connectivity was also highlighted. While an 80% reach is observed the 20% exclusion is not acceptable. The challenges of online assessments and the uniformity of online educational activities were also discussed. While acknowledging the challenges, members present also spoke of the need to use this as an opportunity to transform. India being a land of opportunities and there is a possibility of India becoming a technology centre in AI, Blockchain, and IoT.

Date: 9 May 2020, Time: 7:00 to 8:15pm Platform: Google Meet

SJEC	Industry
1. 31 Faculty from the Department of Mechanical Engineering led by Head of the Department, Dr Sudheer M. 2. Department coordinator for IIC - Mr Chiranth BP. 3. Mr Sathyendra Bhat - Chairperson of Industry Interaction and Entrepreneurship Group of Committees. 4. Ms Sangeeta Ferrao, Placement Officer - SJEC	**1. Mr Daedal D'Souza** Alumnus, Class of 2015 Currently working for Rockwell Collins (Aerospace) **2. Mr Rahul Deshak** 24 years of experience in Automobile and Aerospace Industry Operational Head of a Leading Business Unit. **3. Mr Mayur K** 14 years of experience in Design of Automobile and Aerospace Industry Patent holder on Landing Gear Systems US Based Aerospace Industry

Moderated by:
Dr Binu K G - Associate Professor - ME. Faculty Coordinator (Member) - IIC.
Mr Daedal D'Souza – Alumnus, Class of 2015. Currently working for Rockwell Collins (Aerospace).



Industry experts highlighted on the importance of aligning the skillsets with the students' career path and passion. They spoke about the need for communication and interpersonal skills as the most important. It was also highlighted that students should be ready for jobs in all industries. Analytical skills, advanced manufacturing technologies, and automation are areas of focus.

Overall, the discussions, highlighted for both sides the challenges they face and possible action plans going forward.

Alumni Article

Introduction to above-ground storage tanks

Oil and gas installations play vital role in ensuring nation's energy and financial security by production of fuel, power and through export of products. Raw materials required for production of various fuels, intermediate products which require further refining and finished products i.e., fuels such as Motor Spirit (MS), Aviation turbine fuel (ATF), High speed diesel (HSD), Kerosene, Fuel oil (FO) etc., are stored in above ground storage tanks in refineries as well as at product dispatch locations such as oil terminals in ports, oil loading facilities inland etc. Various fuels from refineries to terminals/loading facilities are pumped using dedicated piping network.

Above ground storage tanks are cylindrical in shape, perpendicular to the ground with flat bottoms, and a fixed frangible or floating roof which are used for storage of petroleum products, chemicals and water etc., as finished inventory/ intermediate products/ feed. Majority of the above ground storage tanks are designed and constructed as per American Petroleum Institute (API) standard i.e., API650 – Welded tanks for Oil storage. Generally tanks are constructed with Carbon steel plates for storage of oil.

Based on the construction and shape, storage tanks can be classified into:

Floating Roof Tanks: Tanks having roof which floats on the stored fluid. This type of tanks have minimum vapour space hence are used for storing lighter components. Buoyancy required for the floating of tank roof is achieved either by pontoon type roof design. Floating roofs are categorized under two types, external floating roof and internal floating roof.

External Floating Roof tanks: Open roof tanks with roof exposed to atmosphere and the sealing is attained by flexible foam in the vapour space between shell and roof.

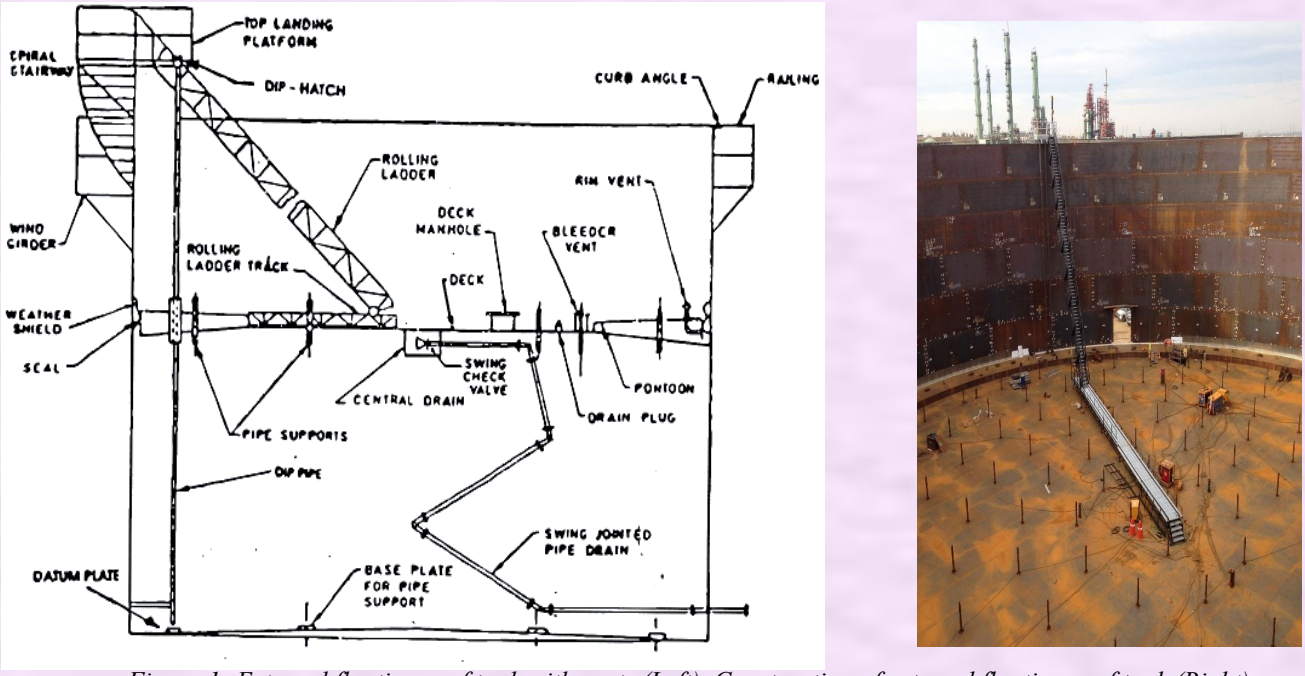


Figure 1: External floating roof tank with parts (Left), Construction of external floating roof tank (Right)

Shell of the tanks are welded to the bottom plates. Roof of the tank are provided with roof legs which support the tank at low level. As the level of the oil increases in the tank, floating of the roof takes place due to the buoyancy provided by the pontoons attached to the periphery of tank roof. Floating roof consists of rain water draining system. Also, roof seal is provided around the periphery of the tank shell to avoid contamination of product and to avoid contact metal to metal contact of shell with roof which may lead to fire due to sparks. Floating roof are approached from shell by a rolling ladder, which changes the position according to the height of tank. At full height of the tank, rolling ladder is almost parallel to the floating roof.

Internal Floating Roof tanks: These tanks are similar to external floating roof type except the roof is floating inside a cone roof. This is used for storing very light products and to achieve a very minimum vapour loss and to avoid product contamination.

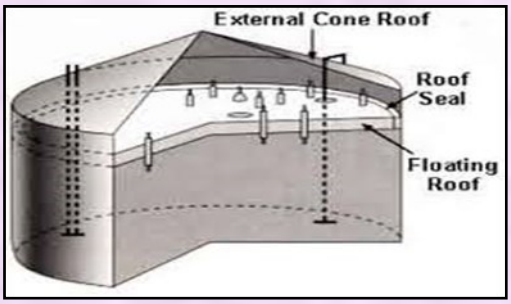


Figure 2: Internal floating roof tank

Fixed Roof Tanks: Cone or Fixed Roof Tanks are tanks with roofs conical in shape, welded to the top of the shell. The tanks essentially have large vapour space which does not permit storing of lighter products having high vapour pressure.

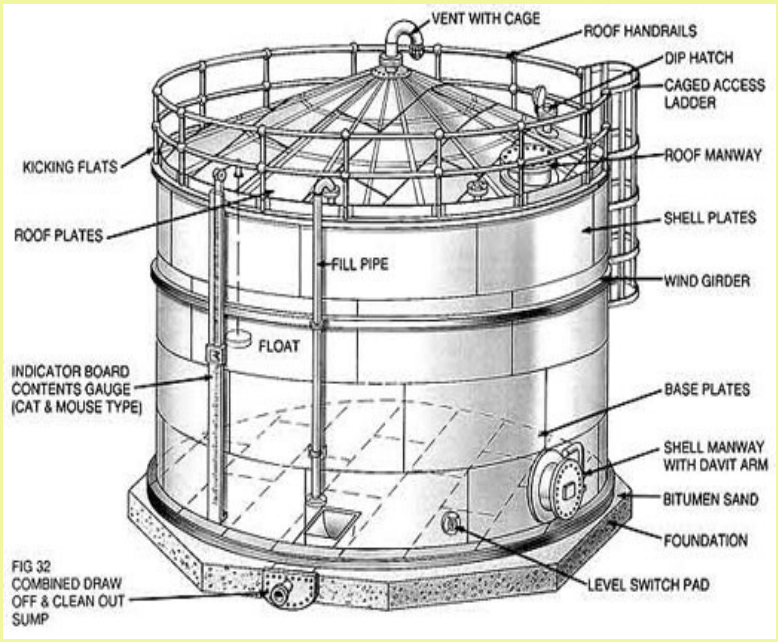


Figure 3: Fixed cone roof tank drawing with parts (Left) and Construction of Fixed roof tank (Right)

Above ground storage tanks are governed by various statutory bodies as safety of these tanks are of prime concern. Any untoward incidents such as fire in these tanks results in loss of assets, life of personnel, reputation, economic impact to organization as well as nation. Safety of such assets are ensured by carrying out periodic inspection and maintenance. Inspection and maintenance of above ground storage tanks are critical activity and are carried out as per API 653 standard i.e., Tank Inspection, Repair, Alteration and reconstruction.

Ref: Images from www.google.com

Mr Arjun P M
Assistant Manager – Inspection
MRPL Mangaluru
USN : 4SO04ME009
Class of 2008

Mechanical Engineering in the Era of Internet of Things

"The Internet of Things has the potential to change the world, just as the internet did. May be even more so"
-Kevin Ashton

The manufacturing and production sectors have witnessed a drastic change in the implementation of technology and have moved from a conventional mechanical based system to software-driven mechatronic systems. The consumer products are designed and produced to be more efficient with multi-fold functionality and high level of intelligence. Among such technological advancement in consumer products, the concept of "Internet of Things" also referred as IoT is gaining significant buzz among the commercial industries. The term "Internet of Things" refers to the integration of mechanical, electronics and computing devices interconnected through standard Internet Protocol and is capable of transferring data over a network without requiring human-to-human or human-to-computer interaction. Over the past few years, the definition of IoT has evolved due to the integration of multiple technologies involving smart sensor and actuator technology, embedded system, real-time analytics, artificial intelligence. **Implementation of IoT application offers advantages of a machine to machine integration, good automation and control with cost effectiveness, better monitoring of devices, increased efficiency and time-saving. Some of the application domains of IoT include connected appliances, smart home security systems, autonomous farming equipment, wearable health monitors, smart factory equipment, wireless inventory trackers, ultra-**

high speed wireless internet, biometric cyber security scanners, shipping container and logistics tracking. According to the statistics, the number of devices connected through IoT applications worldwide will range between 20 to 30 billion by 2025 and will account for about $11 trillion market opportunity globally. The widespread application of IoT will influence every commercial product manufacturing and technology development sector. IoT based technology provides extensive opportunity for mechanical engineers to develop and impact a wide range of interconnected systems and devices. The Bureau of Labour statistics in the U.S has predicted a growth percentage of about 9% in the position of mechanical engineers from 2016 to 2026, with the major contribution from advanced technology related to Internet of Things.

The conventional approach of device development in mechanical engineering emphasized on generating physical motions through a bearing, rails, lead screws, belt drives etc. Products with such an approach have limited functionality and lack of intelligent aspects required for IoT related products. To fit into the rapid change of product development in the era of IoT requires a sound knowledge of interdisciplinary aspects including mechanical, electronics and computer engineering. Thus mechatronic system design and development approach is an essential aspect of technology development with the Internet of Things. The term mechatronics can be defined as a synergy of mechanical engineering, electronics and computing. Mechatronics is represented in many technical domains such as robotics, automation, computer–machine control, control engineering, biomedical engineering and computer-aided manufacturing consumer products etc. Development of IoT based technology typically consists of device development layer with sensor and actuator integration, embedded system, software development for establishment of communication among the IoT devices, data management and analytics system for handling, processing and visualization of device data ,user communication stage with web and mobile applications. The widespread application of IoT based intelligent applications has opened up a wide range of career prospects for mechanical engineers. Devices and hardware, data analytics, networks and structures, protection, user interface development, are some of the trending career prospects of IoT related technology development.

Role of mechanical engineering in devices and hardware development is mainly focussed on IoT device with smart sensors and actuators, establish physical integration and network of intelligent devices. This particular domain opens up vast space for the development of efficient and feasible smart sensors and actuators with advanced functionality, design of smart devices and related components, implementation of devices on the real-time application environment. Data analytics associate with the processing of unstructured data and information from several interconnected gadgets and devices. Statistical and analytical tools are very much required for processing of data from the number of the device put into real-time applications. Development of such statistical tools, interpretation and analysis data from IoT devices could be some of the aspects where mechanical engineers can concentrate on pursuing a professional career. The role of professionals associated with network and structures, protection, and user interface development deals with the development of networking system required for the integration of multiple sensors and actuators in devices, setting up protocols for internet security to address the issues of safety of the consumer data and development of user interface through application and software development. The role of professionals associated with network and structures, protection, and user interface development deals with development of networking system required for the integration of multiple sensors and actuators in devices, setting up protocols for internet security to address the issues of safety of the consumer data and development of user interface through application and software development.

In order to be a successful mechanical engineering and take up professional careers in the domain of Internet of Things, one needs to possess certain skills which will help to climb up the ladder to achieve professional goals. The interdisciplinary approach of engineering is need of the day to fit into the technological revolution such as the Internet of Things. Apart from conventional mechanical engineering aspects one needs to associate with other domains of engineering such as electronics, computer applications. **Some of the key skills required to establish as an IoT professional include IoT hardware design, IoT application design, Mobile applications, Consumer data security, Network and Business Intelligence**. Computer-Aided Design, Finite element analysis, Micro-electromechanical systems design, Sensors and actuator modelling and simulation, quality management, development of wireless connectivity protocols such as WiFi, Bluetooth and other networking solutions are some of the crucial skills required for the development of multi-functionality IoT hardware. IoT application design requires a skill set related to user interface design, user experience, product design, graphic design and web designing. Development of an interactive platform for IoT devices through mobile application requires a sound knowledge of cloud computing, wireless and mobile technologies to enhance the user experience. Imparting intelligence into the IoT devices requires a full proof system for acquisition, analysis and interpretation of the device data. This, in turn, requires expertise related to data analytics, data computing, machine learning and artificial intelligence. Sound knowledge of different coding languages through python, C++, java could be of great assistance for IoT professionals in this regard. Besides knowledge related to networking aspects such as Bluetooth, WiFi network, conversant in (WPA/WEP or 3G/4G) networks, using RFID (radio frequency identification), setting up and resolving issues in modern networks is need of the day to engage in IoT related profession.

In the era of rapid technology advancement, the IoT has provided a vast opportunity for the establishment of connected networks of devices and equipment for achieving enhanced functionality and performance. The widespread application of IoT technology has created a wide range of professional domains where mechanical engineers play an essential role. With the adaptation of the interdisciplinary approach of engineering and upgrading critical skill set at the early stage will make the mechanical engineering stream to be ready to win the race of 21st century technology and innovation.

Mr. Mohith S
(BE, M.Tech, Ph.D*)
Research Scholar
Department of Mechanical Engineering
National Institute of Technology Karnataka
USN 4SO09ME065, Class of 2013

Alumni **Article**

Work life during the COVID-19 pandemic

The COVID-19 pandemic has dramatically altered our work and lives in a matter of months. Though there is hope that the pandemic will end in a couple of months, the questions remain: What will be the new normal in how people work? How will companies ensure that employees remain mentally healthy during the change? How to revive business after the pandemic ends? The main focus of crisis management in every organization has been managing the disruption caused by the pandemic that has affected business, employees and stake holders.

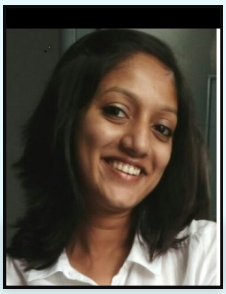
The ongoing pandemic has led to increasing layoffs, pay cuts, reduced cross functional collaboration, lesser productivity and so on. There is a serious risk of disruption of supply chains that will result in loss of revenues for companies. While the future is uncertain, one thing is clear, workplaces will have to adapt to changes if they want to survive. They will have to adopt flexible work arrangements to ensure that both their employees and business are safe.

It is very important for employees to take some measures to enhance productivity at work and nurture their own mental health. Some of the important measures include finding the right place to work, setting up a work schedule and communicating the same to your colleagues and managers, finding out the time of the workday when you are most productive and maintaining a to do list, as it is very easy to lose sight of priorities, tasks and deadlines. We need to accept that we cannot get it all done. Multitasking will not lead to success in the long term. Multitasking will only lead to stress and potential burnout.

Employers have to re look into the ways they evaluate their employees. Organizational flexibility is the need of the hour. Organizations must set realistic targets for the employees. They have to consider judging the employee by the quality of their work and not by the number of hours they log in. It is important to consider the impact the work has, without considering how and where it was completed. The pandemic has also caused an increase in stress and anxiety among employees due to economic, social and health uncertainties. It is important for organizations to promote cooperation among employees to create awareness of psychological issues.

As adoption of automation continues to change job roles and increase demand for new skills, companies face urgent needs to upskill workforces. Organizations need to manage not just their digital transformation, but upskilling and transition of their workforce as well. Most employees believe their skills will be redundant in the next one or two years. To remain employable in such competitive times, people need to upskill themselves. Accepting that everything is not under our control, we need to learn how to adapt to situations. And the fastest way to adapt is to be prepared through upskilling by making learning a lifelong commitment.

COVID-19 could be a tipping point for learning and working as we know it. While many people have lost their jobs and income, many others continue to work. Making sure that work can be performed safely is a shared priority. COVID-19 continues to spread across the world with a trajectory difficult to predict. The health, humanitarian and socio-economic policies implemented will determine how quickly and strongly we recover. It would take a variety of strategies and initiatives to address the issues caused by this pandemic.



Ms Ramya B R
USN: 4SO11ME092, Class of 2014

Senior Engineer, Exhaust After treatment,

(PS/ENS1-ES-IN)
Bosch Limited - (PAN AAACM 9840 P) - (CIN: L85110KA1951PLC000761) | Post Box No:3000
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Karnataka, India | INDIA | www.bosch.in
BR.Ramya@in.bosch.com

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Email to us @ hod.mech@sjec.ac.in

Alumni **Q+A**

Mr Preetham Prince Pinto
USN 4SO05ME059
Class of 2009

MyRoadRunner, a phenomenon that started as an online delivery, is now a one-stop solution for all needs. The genesis behind who we are is to make life hassle-free by providing access of every city to its residents at their fingertips.

MyRoadRunner has simplified everyday lives of its users. Our hyper-local model has transformed the way people avail services.Established in April 2016 by Prince Pinto and Michelle Pinto, **MyRoadRunner** began as an online delivery service provider of fish, meat, vegetables, fruits and groceries. After bringing the online delivery revolution, we expanded our vision and dream of touching everyday lives in a much bigger way.

Through the app, one can place an order for any item they are looking for from any store and it would be delivered to their doorstep. **MyRoadRunner** offers delivery as well as services. Our App has a unique feature to customize an order. In this feature one can place a custom order in case one fails to find a store for a product of their choice.

The team believes, **MyRoadRunner** holds the potential of being the largest on-demand service in India and globally, where users will be able to find anything and everything on a single platform.

Currently, **MyRoadRunner** service is functional in New Zealand, Mangalore, Udupi, Manipal, Mysore, Chamarajanagar and Mandya with many more cities to be launched in next few months.

Awards:

Best Startup Award - POWER (Platform for Women Entrepreneurs)
Best Startup Award - Yenepoya & Canara Bank
Best Women Entrepreneur - Yenepoya & Canara Bank
Women Entrepreneur Award - JCI Mangalore Lalbagh
JCI Sadhana Shri Award 2020 at Bizcon - Advitheeya Business Conference

My spouse Michelle Pinto too is a proud Josephite. I married my college sweetheart and we together co-founded our dream **MyRoadRunner**.

Q1. How did you get your idea or concept for the business?

Coming from a data mining background, I knew internet had a massive potential. I knew where the world was heading and wanted to invest in the future.

I knew 'MyRoadRunner' was going to be an 'everything' store.

When you try to do everything in the beginning, it's easy to fail. You spread yourself too thin. That's why I wanted to master selling fish online which is a very much unorganised market and before I added on as second or third category.

A lot of businesses try to milk their profits in the short-term and have no vision for the long-term. I make sure that **MyRoadRunner** is different – I encourage long-term investments even if they don't bring an immediate return on investment (ROI).

2. What services or products do you offer?

We offer all the products and services that a city would have offline or through brick-and-mortar stores in the city using the multi-vendor aggregator model.

3. How do you advertise your business?

It's purely word of mouth which has helped us far. We are also on social media and join hands with local events and organisations where I am a part of like JCI, BNI and Kanara Entrepreneurs.

As now we have a presence in multiple cities and globally, there are adverts in radio and TV that we will be starting in some cities.

4. What is the secret to your success in this business?

The customer relationship is a big deal at **MyRoadRunner**. Keeping them happy makes everything work. Secondly, systems and processes are always our top priority. Systems are well thought out, tested and updated as necessary. Such systems don't only save time but identify defects at the root and correct them before a major problem emerges.

5. When you recruit candidates for your company, what do you look for in an individual?

Talented and passionate people. Once again, I do not want to hire any capable person. I want **MyRoadRunner** to find the best… so I ask hiring managers to look for candidates they truly admire.

I make sure that am hiring people that not only I can teach, but make sure am hiring people who are also going to teach me things.

6. If you had one piece of advice to someone just starting out, what would it be?

Be passionate, be ready to take big risks and fail. You have to be willing to take risk. Big failures are a necessary part of the journey towards success.

7. Which were your favourite classes during Engineering in SJEC?

Strength of Materials (currently Mechanics of Materials)

And the irony is that I failed in CCP in my first semester and ended up as a data scientist in Infosys and then started the company which is technology centric.

My wife now and a good friend then taught me CCP and I cleared the paper in second attempt □.

8. Would you like to give some suggestions on the curriculum of Mechanical Engineering?

Subjects like mechanical engineering are skill based. In these subjects, practical knowledge is more important than theoretical knowledge..... Getting theoretical knowledge has no value until students can apply it for practical purposes. When you do something with your own hands you remember better.

9. Would you like to participate in alumni activities of SJEC?

Life at SJEC is an invigorating experience that has paved the way for me to shine as a leader today with the inspiring academic environment, the warmth and care of the Professors.

I would definitely like to partake in the activities of the Alumni Association, as I am sure that the alumni can play a significant role in institution-building.

10. Is there any scope for SJEC graduates in your company for internship/project/employment?

MyRoadRunner has a variety of projects that accelerate career growth. Intern projects can range from working on projects in various domains: operations, technology, marketing, sales, finance.

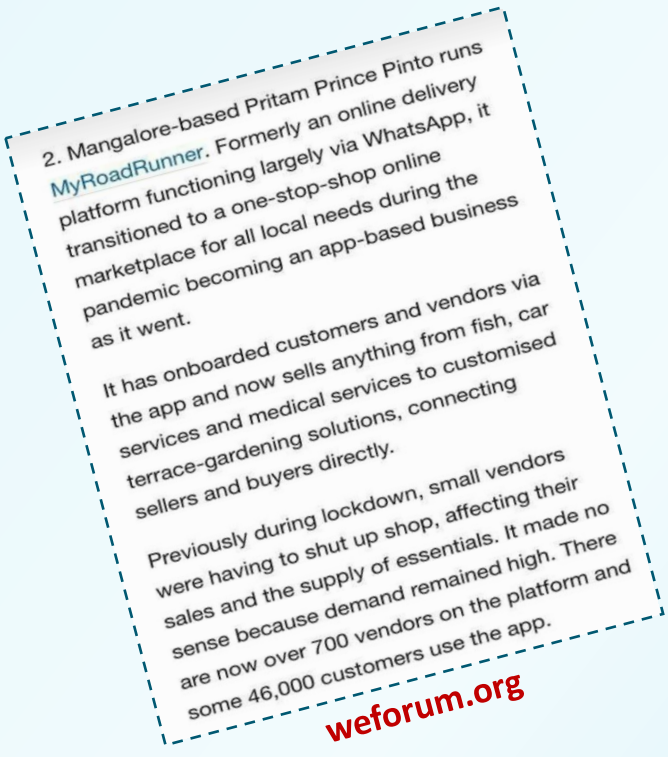
During the duration of an internship, interns own their projects from start to finish, most of which will wrap up towards the end of their internship. At that time, managers provide feedback on the intern's overall performance, deliverables, and skills as they relate to the role, project expectations and leadership principles.

We provide every intern with both a mentor and a manager who will work to enable their success and help facilitate their career growth. These partners will provide guidance on projects, give feedback on key deliverables, and work to remove barriers.

We empower interns to take full ownership over their work, which is why we provide a variety of self-service resources to help teams meet their goals and learn from one another.

In addition to projects, interns are provided with many opportunities to develop personal and professional networks by taking part in social events, diving into workshops etc.

Appreciations for service during COVID19 pandemic



CNBC India

Ashwin Sequeira
4SO04ME015

Company Name: CADD CENTRE Training Services Pvt Ltd, Puttur

CADD Centre is Asia's largest CAD training institute with its centers spread all across the world with more than 1000 centers in 30+ counties having trained over 1.5 million students and professionals in the past 32 years.

In 2011, Mr Ashwin Seqeuira started a new CADD centre at Puttur to cater to the CAD/CAM/CAE training requirements of students around. Over the past 10 years, his team has trained over 1000 students.

Website: www.caddcentre.com
Email: ashwin.sequeira@gmail.com

Preetham Prince Pinto
4SO05ME059
Class of 2009

Company Name: "My Road Runner", Mangaluru

My Road Runner is a startup based at Mangaluru that provides pick-up and drop-off services to people. Collecting the customer orders online, they provide wide range of services right from essentials, home services, pick and drop, beauty, restaurant services, and much more.

Website: https://www.myroadrunner.in/

Email: prince@myroadrunner.in

Royston Pinto
4SO09ME087
Class of 2013

Company Name: "Lumino Matrix Digital Technologies", Mangaluru

Lumino Matrix Digital Technologies is an end to end digital technology solution provider based in India. It understands the display needs of retail, Education, advertising and interior designing industries, and continuously innovate to deliver phenomenal products supported by technically sound software solutions. The entity envisions environmentally friendly, futuristic display systems across industries, that will be supported by Lumino Matrix with exceptional service. Our Partnership with India's and world's reliable tech-brands and software companies makes us a competent player in the Industry.

Website: www.luminomatrix.com
Email: hello@luminomatrix.com

Ananth Mallya
4SO11MEO11

Company Name: "Sri Ram Soaps", Mangaluru

Graduated as a Mechanical Engineer, more passionate about the business, registered a proprietary company called Sri Ram Soaps. It is a liquid detergent manufacturing company, major market being Amazon India and Flipkart.

Email: srswmlr@gmail.com

Alumni Entrepreneurs

Jackson Noronha
4SO11ME045
Class of 2015

Company Name: "Lohatec LLP", Bejai, Mangaluru"

Lohatec focus on the manufacture of quality machine components and precision parts. It provides a wide range of custom machining services, including CNC Milling Service, CNC Turning Service, Mechanical Component Design, Grinding, 3D Printing, Laser Cutting & Engraving (Metal & Non – Metal).

With skilled personnel in design, manufacturing and quality control, company has the capability to meet the exacting need of industrial customers with timely delivery.

Website: http://lohatec.com/

Email: lohatec@gmail.com, info@lohatec.com

Colin Rodrigues
4SO12ME017
Class of 2016

Company Name: "MIGHTY TUNE AND BRAKE", Canada

Mighty Tune and Brake Newton is a one-stop destination for complete auto-care and repair services. With years of experience, expert knowledge and expertise professionals, it is the source of premium quality services at affordable prices in automobile repair and maintenance in Surrey. Maintaining quality guidelines and delivering 100% customer satisfaction, it takes auto-care to the next level being the best in Surrey Canada.

Website: www.mightytuneandbrake.com
Email: admin@mightytuneandbrake.com

John Baptist
4SO12ME040
Class of 2016

Company Name: "Design and Development SmartLabs", Mangaluru

The Design and Development (D&D) SmartLabs is a start-up initiated at St Joseph Engineering College, Mangaluru. With a vision of shaping the lives through meaningful products, D&D SmartLabs work towards creating value for designers, developers and innovators.

D&D SmartLabs won the business pitch competition conducted by Blackstone Launchpad at Jefferson University, USA. During Nov 2018.

Website: http://www.dndsmartlabs.com/
Email: rodriguesjohnbaptist@gmail.com

Dilish Lobo
4SO13ME034
Class of 2017

Company Name: "WAMLOR – Eco Water Bottle", Mangaluru

WAMLOR Glass Water bottles are made of high durable heat resistant premium borosilicate glass. It is resistant to thermal shock and can be used at very high temperatures, unlike normal glass bottles which shatter at high temperatures. It is corrosion resistant, unlike plastic or steel. The presence of optical clarity complements the aesthetics. Glass water bottle is safe and your water will taste just like it should. Fruit juice, tea, coffee, milkshake can be stored for hours long in the bottle (placed inside the fridge, in the car or on the dining table) without any fear of leaching of toxic chemicals. When you own one, you care about your health. This water bottle is Eco friendly and non-toxic.

Email: dilishlobo@gmail.com

Alumni Entrepreneurs

Vion Joseph Martis
4SO13ME122
Class of 2017

Company Name: "Vtria Engineering Solutions Pvt Ltd", Mangaluru

VTRIA Engineering Solutions Private Limited is an ingenious start-up formed by professionals from the field of engineering, to provide Industrial Automation, Electrical and Air Conditioning solutions for varied applications.

Website: https://www.vtria.in/

Email: vion@vtria.ac.in

Allan Mathew
4SO14ME011
Class of 2018

Aman Magwin D'Souza
4SO14ME014
Class of 2018

Alric Eli Karkada
4SO14ME012
Class of 2018

Company Name: "Monsterleaf India" Mangaluru

Monsterleaf is an eco-startup and E-commerce retail brand kickstarted focusing on "Nature first" principle. Founded by first generation Entrepreneurs who are alumni of SJEC from the coastal belt of Mangaluru and hill station Coorg. Built on the concept of triple bottom line – People, Profit and planet, Monsterleaf focuses mainly on developing, manufacturing and marketing sustainable products while educating people about the impact of our lifestyle revolving around plastics on the only planet we are inhabiting and need to switch to sustainable living. Monsterleaf helps you take one stride at a time towards minimizing plastic usage in your day to day living and switch to a healthier & sustainable plastic-free products.

Website: www.monsterleaf.in

Email: monsterleafbiz@gmail.com

Pravith Rodrigues
4SO14ME082
Class of 2018

Company Name: "Kasera" - Easy Chair Start-up, Mangaluru

The Kasera is the first product from techfurno which an updated form of an easy chair is. This is particularly made to give immense relaxation. This is best suitable for office workers, the old generation, the young generation and for all the people who just want to relax.

Email: pravith32@gmail.com

Darryl Steven Dsouza
4SO15ME027
Class of 2019

Company Name: "The Tyre Shop", Kuntikana, Mangaluru

The Tyre Shop was established in the year 2018 with Sales and Service of Tyres, Batteries and Insurance as its core business. Our vision is making people's life easy by offering a complete solution for Tyres, Batteries and Insurance.
We from The Tyre Shop strive each day with a focus to offer the best products with Installation that will give customers the finest driving Experience. Our aim is to give superlative services to customers along with sharing the best vibes with our partners.

Email: darryl.dsouza14@gmail.com

Alumni Entrepreneurs

Mohammed Hussainar

4SO15ME070
Class of 2019

Company Name: "Almisbah Car Rental and Agro-Support Equipments (ACRASE) Pvt Ltd", Mangaluru

ACRASE is incorporated with the aim of providing self-drive car on rental service for the people of the city and agricultural equipments to farmers. ACRCSE makes your requirements satisfied and making it hassle-free and experiencing joyful tour, With the motto *service with safety: love and concern*

Edible Plantae Foods Online LLP, a LLP incorporated to serve the people with home delivery of fruits and vegetables.
Website: www.almisbahcars.com, www.edibleplantae.com
Email: mhussainar@misbah.in

Artwork by Ms Rhea D'Mello (Class of 2017)

Drop your valuable suggestions and feedback to us @ mech.dept@sjec.ac.in, sudheerm@sjec.ac.in

LOVING TRIBUTE

Sarvesh Kumar

Expired on 26-9-2020

Alumnus- Class of 2018
Department of Mechanical Engineering

May his soul rest in peace

Management, Staff & Students
ST JOSEPH ENGINEERING COLLEGE
Vamanjoor, Mangaluru - 575 028

Our Deepest Condolences

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering was established in the year 2002 with the vision of nurturing technically competent and socially responsible Engineering Professions. Alma mater to more than 1600 Graduate Engineers over the past 16 glorious years; the Department has soared to newer heights with the efforts of the dedicated faculty and state-of-the-art infrastructure. The Department offers Undergraduate (B.E.), Post Graduate (M.Sc. in Engineering by Research), and Doctoral (Ph.D.) programme; with an annual intake of 180 candidates for B.E. Course. The Department believes in the overall growth of a student in both curricular, co-curricular and extra-curricular activities and encourages them to participate in various paper presentations, seminars, workshops, industrial visits and other technical activities and strives to prepare students for carriers across a broad range of industries. The faculty and research scholars in the Department are actively involved in research and have published their research in many national and international journals in fields of Composite Materials, Tribology, Fuel Cells, Spray Forming, Lean Manufacturing and Six Sigma. All of the Department's laboratories and workshops are accessible to students for conducting project work, curricular lab work and other mini projects. The Department proudly announces re-accreditation of its B.E. Mechanical Engineering programme by the NBA New Delhi for the third time which is valid till June 2022. The Department has also obtained the Permanent Affiliation status from VTU Belagavi from the academic year 2019-20 to 2024-25.

ST JOSEPH ENGINEERING COLLEGE

(Affiliated to VTU, Belagavi and recognised by the AICTE, New Delhi. B.E. - CSE, ECE, EEE, ME Accredited by NBA, New Delhi)

Vamanjoor, Mangaluru - 575 028, Karnataka, India

Ph: 91-824- 2263753 / 54 / 55 / 56 / 2868100 | FAX: 91-824-2263751 | E-mail: sjec@sjec.ac.in

For Admission: +91 99729 32972 / 99726 95974 / 91-824-2868155 / 106

admissions@sjec.ac.in | office@sjec.ac.in | www.sjec.ac.in

Please leave your feedback or write to us @ **mech.dept@sjec.ac.in**