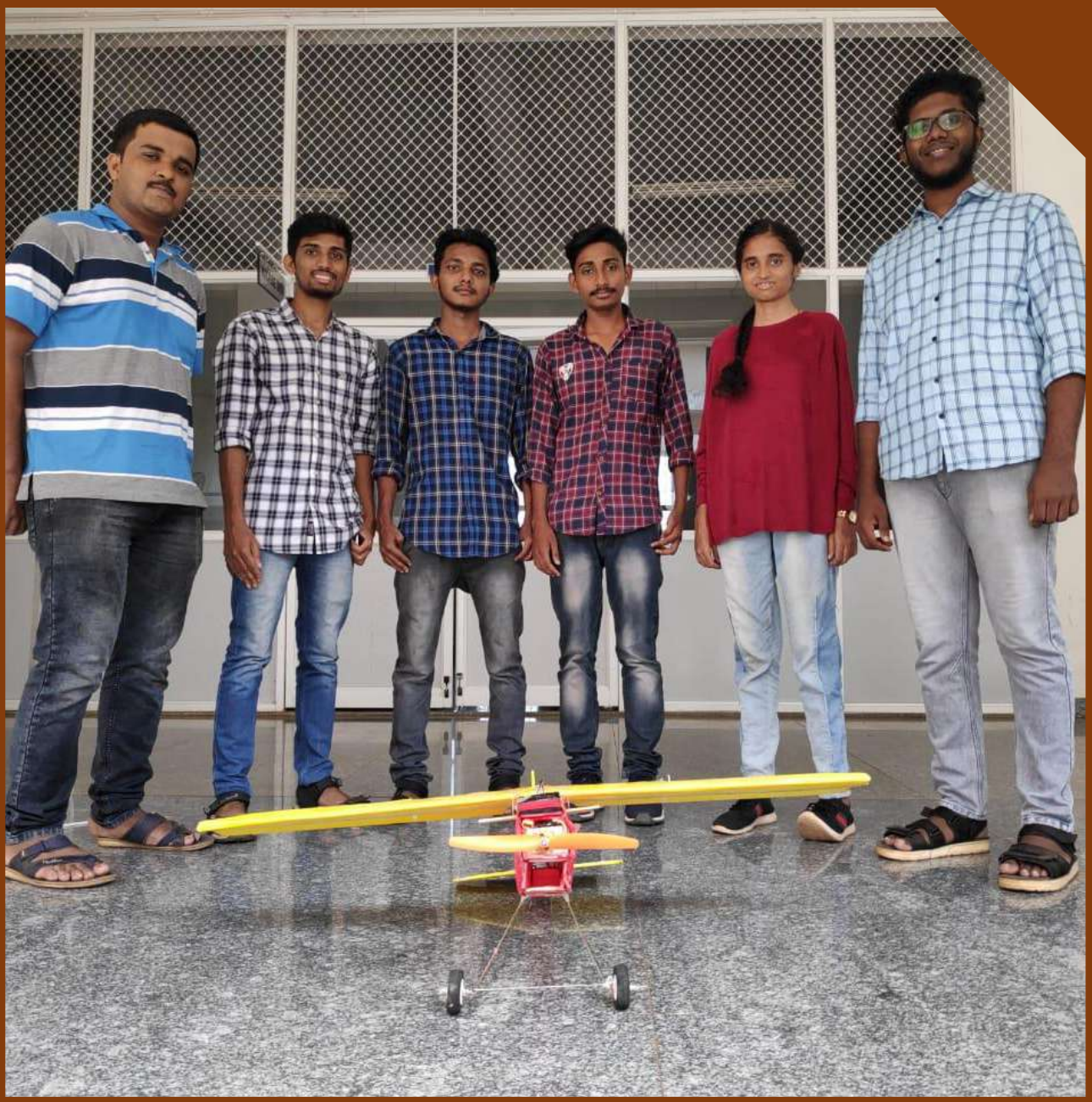
A Association of RoyalMechanicalStudents

INGENIUM

Volume 3, Issue 2, October – December, 2021

Department Newsletter

Department of Mechanical Engineering



AJ Institute of Engineering and Technology

(A unit of Laxmi Memorial Education Trust ®)

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AJIET

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DEPARTMENT NEWSLETTER

Message from Editor's Desk:

Welcome to the third volume, second issue of Newsletter from the Department of Mechanical Engineering. This newsletter is a digital way for us to communicate with our students, faculty members, alumni and industrial partners. It aims to showcase the glimpse of the departmental activities and achievements. It enlightens the readers about the latest happenings in the department, focusing about different activities like placement, industry-academia, club activities, student and faculty achievements.

HOD's Message

Welcome to the second issue of the Mechanical Engineering Department Newsletter - 'IGENIUM' in its volume 3 series. It is about looking back and summing up every prestigious moment in the department. This newsletter is a bridge for us to communicate with our students, faculty members, alumni and industrial partners. It aims to showcase their achievements by which make them proud and self-motivated. We take the readers for a voyage of the latest incidence and happenings in the department. Any feedback will be greatly appreciated for the improvement of the next issue of the Newsletter.

Dr. Rajesh Rai P
Head, Department of Mechanical Engineering
A. J. Institute of Engineering and Technology

VISION

To create globally competent and self-reliant mechanical engineers adaptive to an interdisciplinary environment contributing to society through development, authority and entrepreneurship.

MISSION

- To offer high-quality graduate programme in the fields of Mechanical Engineering with value education to the students and make them responsive to societal needs.
- To nurture the students with a global outlook for a sustainable future with high moral and ethical values.
- To strengthen collaboration with industries academia and research organizations to enrich learning environment, thus enhance research and entrepreneurship culture.
- To create awareness about the need of interdisciplinary applications through alumni industry-institution interactions.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Prepare graduates with mathematical, scientific and engineering skills to design and develop energy efficient systems for sustainable development.

PEO2: Excel graduates with high level of technical competency combined with research and complex problem solving ability to generate innovative solutions in Mechanical and multi-disciplinary areas.

PEO3: Equip students with modern tools, technology and advanced software's for deliberating engineering solutions.

PEO4: Inculcate graduates with strong foundation in academic excellence, soft skills, leadership qualities, professional ethics, and social concerns and understand the need for lifelong learning for a successful professional career

PROGRAM OUTCOMES (POs)

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

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

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

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

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

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Apply the knowledge of modern engineering tools to design and Analyse the products and processes related to mechanical engineering system.

PSO2: Develop technical and interpersonal skills pertinent to mechanical and allied engineering for careers in industry, academia and government organistions.

RESEARCH

Domain Name	Domain Co-coordinator	Domain Members
MANUFACTURING	Dr. Rajesh Rai P	Mr. Prashanth D A, Mr. Nithin Shet, Mr. Prasad B G
THERMAL	Dr. Vighnesha Nayak	Dr. Sreejith B K, Mr. Prakhyath, Mr. Karthik A V
DESIGN	Mr. Sunil Kumar S	Mr. Sudheer Kini, Mr. Harold J D'Souza

List of Companies Visited For Placements

PLACEMENTS FOR MECHANICAL STUDENTS - 2021 BATCH		
COMPANY NAME	**DATE OF DRIVE**	**ELIGIBLE STUDENTS**
Jaro education	30/11/2021	34
Actalent	12/01/22-13/01/22	13
Unschool	2/12/ 2021	32
Skolar	2/12/ 2021	34
Faurecia	13/01/22	1
Eleation	15-11-2021	7
TCS	30/8/2021	5
Juego Studios	5/2/2022	1
Anglo eastern	10/2/2022	4
Byjus	25/2/2022	7
Makino	2/5/2022	3
Bosch	3/6/2022	8

Black frog	**2/6/2022**	**9**
Berry global	**17/05/2022**	**4**
INDO MIM	**9/5/2022**	**5**

WORKSHOPS/WEBINAR/ EVENTS

AYUDHA POOJA-2021

Department of Mechanical Engineering, A J Institute of Engineering and Technology celebrated 'Ayudha Pooja' on the 14th of October 2021. All were gathered in the Machine Shop lab to pay reverence to the equipment that allows for smooth learning.

The lab was adorned with flowers and mango leaves. A photo of Devi with floral decoration was set. The lab had beautiful rangolis on the ground, garnered a lot of praise from students and staff alike. Traditions and cultural norms were adhered to provide all with a holistic celebration experience.

The doorway was decorated with flowers and mango leaves and hosted a sign welcoming everyone. At 09:30 am, the ceremony started off with a Pooja to the goddess. Later Pooja were

performed separately to various equipments in all the labs. The occasion was graced by our Principal, HODs, Faculties, Staffs and Students.

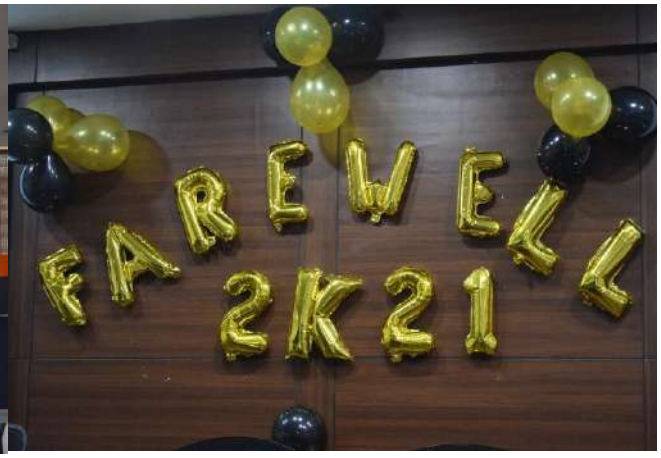
The prasadam was distributed at the end to all the devotees. The active participation of staffs, the efforts of ARMS and other students made the event a grand success.

Farewell Function-(2017-2021 Batch)

The formal Farewell function started at 10.30 AM in the seminar hall -1 of AJIET, Mangaluru. Mr. Harshith President of ARMS escorted the dignitaries to the dias. Vice Principal of AJIET, Mangaluru Dr. Nagesh H R, HOD of Mechanical Engineering Department Dr. Rajesh Rai, Association Co-ordinators Mr. Karthik A.V. and Mr. Harshith President of ARMS were present on the dias.

Function began with invocation song by Deepa, Deeraj and Manish K. Mr. Vighnesh R pai Formally welcome the dignitaries on the dias and seniors to the functions.

HOD of Mechanical Engineering Dr. Rajesh Rai addressed the audience and suggested the students that Engineering students should be towards developing the nation and has to be inherent within themselves.



Placement coordinator Mr. Prasad B G, NBA Coordinator Sunil Kumar, Project Coordinator Vighnesh Nayak, Placement Head Vivek Rajan Bhandary and Kishore Kumar motivated the students to develop trust and ethical values at the working place.

Mr. Vighnesh R Pai secretary of ARMS expressed his old memory with his seniors. Winners of academic toppers was awarded and honoured respectively by our Vice Principal guest. Speaking to the

audience Dr.Nagesh H R Vice Principal AJIET, Mangaluru said that Students should be result oriented that is it should end up with serving the society by nurturing the minds with cutting edge technologies and skill sets.

Ms. Deepa A S was Master of Ceremony and Mr. Karthik A V proposed vote of the thanks. Various Departments heads faculty and student are witnessed the event.

Inaugural ceremony of Association of Royal Mechanical Students (ARMS) 2021-22

The formal inauguration function of Inaugural ceremony of Association of Royal Mechanical Students (ARMS) 2020 -2021 started at 1.30 PM in the seminar hall -3 Of AJIET, Mangaluru.

Mr. Harshith President of ARMS escorted the dignitaries to the dias. The chief guest of the function was Mr. G.S. Hegde, Joint General Manager, MCF Mangaluru

Principal of AJIET, Mangaluru Dr. Shantharama Rai, HOD of Mechanical Engineering Department Dr. Rajesh Rai, Association Co-ordinators Mr. Karthik A,.V. and Mr. Harshith President of ARMS were present on the dias.

Function began with invocation song by Deepa, Jayaprakash, Deeraj and Manish K followed by lighting the lamp by chief guest and dignitaries present on the dias. Mr. Vighnesh R pai welcome the dignitaries. The chief guest of the function Mr. G.S. Hegde inaugurated the association. Mr. Ashish introduced the chief guest to the audience.

Mr. Harshith formally welcomed the students of second year and Third year students then delivered the association activity report. The chief guest of the function Mr. G.S. Hegde addressed the gathering and said that the Engineering students should be aware of the interdisciplinary subjects so that it will greatly help them to pursue their career in automobile sector beside the fact that the additional attributes of the students like Commercial awareness, Problem-solving, Team working, Relevant

technical knowledge, Good leadership, IT and Analytical skills are inevitable part of the any company requisites.

HOD of Mechanical Engineering Dr. Rajesh Rai addressed the audience and suggested the students that the endeavours of Youth especially Engineering students should be towards developing the nation and has to be inherent within themselves. Speaking to the audience Dr. Shantharama Rai Principal AJIET, Mangaluru said that Students association activities should be result oriented that is it should end up with serving the society by nurturing the minds with cutting edge technologies and skill sets. The principal presented a memento as a love and gratitude to the chief guest.

Intra department Volley Ball Match

Intra Department Volley Ball Match was organized on 17-11-2021 at 2:00 PM-5:00 PM in AJIET Play Ground. The Competition began with Inaugurated by Dr. Rajesh Rai P HOD, department of Mechanical Engineering and Spoke some few words to the students. Students from 2nd, 3rd and final year students Participated in the event.

Total 5 teams were participated in the event (2 teams from 4th year and 3rd year then 1 team from 2nd Year). All students were actively participated in the event. Finally Mr. Sumanth and his team won First place. Second place backed by Mr. Deekshith and his Team 4th year students.

Sl. No.	1st Place (3rd Year) Team member's	2nd Place (4th Year) Team member's
1	Sumanth	Deekshith
2	Shamath	Pratheek
3	Sarthak	Pavan
4	Afthab	Saneen
5	Inayath	Dheeraj
6	Dhanush	Harshith V Shetty

Technical Talk on "Opportunities through GATE Exam" by Mr. Ananth Pai S, M.Tech (IITM),(PhD, IITM), Founder-APEX Academy, Mangaluru on 1-12-2021 at 2.00 PM.

A Technical Talk on **"Opportunities through GATE Exam"** by **Mr. Ananth Pai S , Founder-APEX Academy, Mangaluru** was organized on 01-12-2021 at 2:00 PM-4:00 PM in Seminar Hall-1.

The session began by welcoming the resource person by Mr. Ashish 4th Year Student and introducing the resource person by Mr. Shanthanu Suhas 4th Year Student to the audience. Students from 2nd, 3rd and final year students of Mechanical and Civil Engineering witnessed the event.

Mr. Ananth Pai S covered the following topics by interacting the students: -

- What are the opportunities through the GATE exam?
- Will it be useful to just clear GATE?
- What material must we follow?
- Will GATE only for toppers?
- Will GATE preparation help me in campus selection?
- How many months of preparation is needed?

The session was concluded by delivering the vote of thanks by, Mr. Sahil 3rd Year Student, Department of Mechanical Engineering.

Technical Talk on "Prerequisites to be a Design Engineer" by Mr. Santhosh Kumar KR, Manager, Business Support, CADD Center, Mangaluru on 18-11-2021, 11.00 AM.

A Technical talk on **"Prerequisites to be a Design Engineer"** by Mr.Santhosh Kumar K R, Manager, Business Support, CADD Center Mangaluru was organized on 18-11-2021 at 11:00 AM-1:00 PM in Seminar Hall 1.

The session began by welcoming the resource person by Mr. Shanthanu Suhas and introducing the resource person by Mr. Ashish to the audience. Dr. Rajesh Rai P HOD, department of Mechanical Engineering motivated the students by his inspiration Speech. Students from 2nd, 3rd and final year students acknowledged the event.

The speaker shared industry relevant knowledge & guidance on Insight to Mechanical industry - its vertical & domains. Later he briefed about product life cycle & associated job roles. Also mentioned about prerequisites to securing a job, future technologies and trends.

The session was concluded by giving the vote of thanks by Mr shamth.

Technical Talk by Automotive Club on "Building an Automotive Club" by Mr. Mohammed Sahil - Data Intelligence Analyst at Salesforce, Bangalore on 23-10-2021.

The Automotive Club of AJIET in association with the Technical Club organized a technical talk on "Building an Automotive Club" on 23-10-2021 at 11 AM in Seminar Hall-1. The resource person was Mr. Mohammed Sahil, Data Intelligence Analyst at Salesforce, Bangalore. He is a passed out student of MITE and is awarded with certificate of achievement for the successful completion of Step into Robotic Process & Automation during GUVI RPA SKILL- A - THON etc.

Mr. Sunil Kumar S, faculty coordinator initiated with introduction about the automotive club and also introduced about the speaker. Further the session was continued with a detailed talk on the building of an automotive club. The speaker highlighted on team formation, pre-requisites, events and outcomes. The different types of events for auto vehicles such as ATV, Formula-3, Go-Kart and quadbikes was discussed. It was told to strictly follow the rulebook for a perfect build and teamwork. The speaker shared a few photos and videos of his experience as a captain of Formula Mite Racing 2019-2021, manager of Formula Mite Racing 2017-2018, Participated in FFS 2018 held in Karimotors Coimbatore, participation in BAHA 2019 in Maharashtra & NEKC 2020 in Bhopal. The session was extended with an interrogation and finally the speaker was honored by the HOD of

Mechanical Engineering. Over the talk truly motivated the young and rising engineers of AJIET.

STUDENT PROJECTS

SL. NO	BATCH	USN	STUDENTS NAME	GUIDE	PROJECT TITLE
1	B1	4JK18ME044	VIGHNESH R PAI	Dr. Vighnesha Nayak	Electricity generation from Hydrodynamic behaviour of floating substances in directional seas
2		4JK18ME014	DEEPA A S		
3		4JK18ME018	HARSHITH SHETTY		
4		4JK19ME402	MANISH K ANCHAN (TL)		
5	B2	4JK19ME405	SHRAVAN K	Mr. Prakhyath	Experimental and computational analysis of co-centric tube heat exchanger with pin-fin
6		4JK18ME026	PAVAN KUMAR (TL)		
7		4JK18ME036	SHARAN CHANDRAHAS		
8		4JK18ME038	SHRAVAN P C		
9	B3	4JK18ME050	VASANTHKUMAR T S	Mr. Sunil Kumar S	A novel plastic waste management system to control Air-pollution
10		4JK18ME047	YOJITH K (TL)		
11		4JK18ME051	RAKSHITH ACHARYA		
12		4JK18ME039	SHRAVANRAJ KAMBALI		
13	B4	4JK18ME028	PRANAV T V	Dr. Sreejith	Fire extinguisher using sound waves
14		4JK18ME032	SARANG C M (TL)		

15		4JK18ME049	ABHISHEK SASIDHARAN		
16		4JK18ME027	PRANAV A P		
17	**B5**	4JK18ME003	ADITH AJITH KUMAR	Mr. Harold J D'Souza	Mechanical response of elastomers subjected to degrading environment
18		4JK18ME015	DHARMIK ATTAVAR		
19		4JK18ME040	SHRUJAN J RAI (TL)		
20		4JK19ME403	MANISH M P		
21	**B6**	4JK18ME048	SHREEJESH K	Mr. Sudheer Kini K	Development of disinfection robot using UV light and sanitisation
22		4JK18ME052	VISHNU V NAIR (TL)		
23		4JK18ME041	SRAVAN CHANDRASEKHARAN		
24		4JK18ME043	VENKITESH RAGHAV R		
25	**B7**	4JK18ME021	LESTON LOBO	Mr. Prakhyath	Multi-purpose inspection robot
26		4JK18ME009	ASHISH H		
27		4JK18ME045	VIGNESH (TL)		
28		4JK18ME013	DEEKSHITH		
29	**B8**	4JK17ME028	KAVAN K	Mr. Nithin Shet	Design and fabrication of AeroLeaf wind turbine
30		4JK18ME029	PRATHEEK B V		
31		4JK18ME031	ROSHAN DSOUZA (TL)		
32		4JK18ME016	DHEERAJ		
33	**B9**	4JK19ME404	MOHAMMED FAYAZ	Mr. Karthik A V	Design and development of Remote controlled coconut tree digging and fertilizer pouring machine
34		4JK19ME406	VISHWAJEETH ARUN NAIR		
35		4JK19ME401	JAYAPRAKASH B N		
36		4JK18ME020	KAPOOR SAHIL (TL)		
37	**B10**	4JK17ME011	ASHIN (TL)	Mr. Prasad B G	Road sign recognition and speed variation system
38		4JK17ME023	ISMAIL EBRAHIM		
39		4JK17ME017	EMIL WILLIAM MAVEETTIL		
40		4JK17ME034	MOHAMMED ABSHAR		
41		4JK17ME013	BASIL T BABY		
42	**B11**	4JK18ME007	AKHILRAJ E S (TL)	Mr. Prashanth D A	production of fuel from waste plastic material through injection moulding process
43		4JK18ME002	ABRAHAM MATHEW		
44		4JK18ME006	AKHIL K S		
45		4JK18ME053	ANIRUDH K		

46	B12	4JK18ME030	RITVIK P SHETTY	Dr. Rajesh Rai P	Automated wheelchair cum Stretcher
47		4JK18ME033	SARVESH S		
48		4JK18ME019	HARSHITH V SHETTY		
49		4JK18ME035	SHANTHANU SUDHAS		
50	B13	4JK18ME004	AJAYRAJ M J (TL)	Mr. Sunil Kumar S	Smart drilling machine
51		4JK17ME067	MOHAMMAD SANEEN		
52		4JK18ME034	SAURAV C PADMASHALI		
53		4JK18ME042	VAISHNAV BALIGA (TL)		

INTERNSHIPS

Sl No.	Students name	Organization	Date	Guide
1	Kavan	Shakti Tools	12/03/2022-10/04/2022	Mr. Sunil Kumar S
2	Mohammed Saneen	AJIET, Mangalore	01/09/2021-30/09/2021	Mr. Prashanth D A
3	Abraham Mathew	Southern Railways , Mangalore	01/09/2021-2/10/2021	Mr. Harold Joyson D'Souza
4	Adith Ajith Kumar	Mangalore Pipes,Mangalore	01/09/2021-02/10/2021	Mr. Sunil Kumar S
5	Ajayraj M J	Southern Railways , Mangalore	01/09/2021-2/10/2021	Mr. Prashanth D A
6	Akhil K S	Southern Railways , Mangalore	01/09/2021-2/10/2021	Mr. Prashanth D A
7	Akhilraj E S	Western Indian Plywood Ltd	16/09/2021-15/10/2021	Mr. Prakhyath
8	Ashish H	Ashutosh Engineering	01/09/2021-30/09/2021	Mr. Prakhyath
9	Deekshith	Ashutosh Engineering	01/09/2021-30/09/2021	Dr. Vighnesha Nayak
10	Deepa A S	Ashutosh Engineering	01/09/2021-30/09/2021	Mr. Harold Joyson D'Souza
11	Dharmik Attavar	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Nithin Shet

12	Dheeraj	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Dr. Vighnesha Nayak
13	Harshith Shetty	Ashutosh Engineering	01/09/2021-30/09/2021	Dr. Rajesh Rai P
14	Harshith V Shetty	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Karhik A V
15	Sahil Kapoor	Western Coal Field Ltd	04/09/2021-4/10/2021	Mr. Prakhyath
16	Leston Lobo	Ashutosh Engineering	01/09/2021-30/09/2021	Mr. Prakhyath
17	Pavan Kumar	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Dr. Sreejith
18	Pranav. A. P	Southern Railways , Mangalore	01/09/2021-2/10/2021	Dr. Sreejith
19	Pranav T V	Western Indian Plywood Ltd	16/09/2021-15/10/2021	Mr. Nithin Shet
20	Pratheek B V	Mangalure Pipes	01/09/2021-02/10/2021	Dr. Rajesh Rai P
21	Ritvik P Shetty	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Nithin Shet
22	Roshan Dsouza	Shakti Tools	12/03/2022-10/04/2022	Dr. Sreejith
23	Sarang CM	Western Indian Plywood Ltd	16/09/2021-15/10/2021	Dr. Rajesh Rai P
24	Sarvesh Sujan	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Sunil Kumar S
25	Saurav C Padmashali	Basf India.Ltd	13/09/2021-8-10-2021	Dr. Rajesh Rai P
26	Shanthanu	Toyota Kirloskar Motors Pvt Ltd	17/9/2021-27/10/2021	Mr. Prakhyath
27	Sharan Chandrahas	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Prakhyath
28	Shravan P C	Toyota Kirloskar Motors Pvt Ltd	17/09/2021-27/10/2021	Mr. Sunil Kumar S
29	Shravanraj Kambali	Mangalore Pipes,Mangalore	01/09/2021-02/10/2021	Mr. Harold Joyson D'Souza

30	Shrujan J Rai	Mangalore Pipes	01/09/2021-02/10/2021	Mr. Sudheer Kini K
31	Sravan Chandrasekharn	Western Indian Plywood Ltd	16/09/2021-15/10/2021	Mr. Sunil Kumar S
32	Vaishnav Baliga	Government Tool Room And Training Centre	01/09/2021 30/09/2021	Mr. Sudheer Kini K
33	Venkitesh Raghav R	Southern Railways , Mangalore	01/09/2021-2/10/2021	Dr. Vighnesha Nayak
34	Vighnesh R Pai	Ashutosh Engineering	01/09/2021-30/09/2021	Mr. Prakhyath
35	Vignesh	Mangalore Pipes	01/09/2021-02/10/2021	Mr. Sunil Kumar S
36	Yojith K	Virtual Labs (Nitk Surathkal)	01/09/2021-30/09/2021	Mr. Sudheer Kini K
37	Shreejesh K	Southern Railways, Mangalore	01/09/2021-2/10/2021	Dr. Sreejith
38	Abhishek Sasidharan	Western Indian Plywood Ltd	16/09/2021-15/10/2021	Mr. Sunil Kumar S
39	Vasanth Kumar T S	Southern Railways , Mangalore	1/9/2021-2/10/2021	Mr. Sunil Kumar S
40	Rakshith Acharya	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Sudheer Kini K
41	Vishnu V Nair	Southern Railways , Mangalore	01/09/2021-2/10/2021	Mr. Prashanth D A
42	Anirudth K	Western Indian Plywood Ltd	16/09/2021-15/10/2021	Mr. Karhik A V
43	Jayaprakash B N	Southern Railways , Mangalore	1/9/2021-2/10/2021	Dr. Vighnesha Nayak
44	Manish K Anchan	Ashutosh Engineering	01/09/2021-30/09/2021	Mr. Harold Joyson D'Souza
45	Manish M P	Government Tool Room And Training Center	01/09/2021-30/09/2021	Mr. Karhik A V
46	Mohammed Fayaz	Government Tool Room And Training Center	01/09/2021-30/09/2021	Mr. Prakhyath

47	Shravan K	Government Tool Room And Training Centre	01/09/2021-30/09/2021	Mr. Karthik A V
48	Vishwajeet Arun Naik	Southern Railways , Mangalore	1/9/2021-2/10/2021	Mr. Prasad B G
49	Emil William	Prinston Smart Engineering, Bangalore	03/06/21-03/07/2021	Mr. Prasad B G
50	Ismail Ebrahim	Prinston Smart Engineering Bangalore	03/06/21-03/07/2021	Mr. Prasad B G
51	Ashin. M. K	Prinston Smart Engineering Bangalore	03/06/21-03/07/2021	Mr. Prasad B G
52	Abshar	Prinston Smart Engineering Bangalore	01/09/2021-30/09/2021	Mr. Prasad B G
53	Basil T Baby	Prinston Smart Engineering Bangalore	01/09/2021-30/09/2021	Mr. Sunil Kumar S

NATIONAL/INTERNATIONAL JOURNALS

Dr. Vighnesha Nayak, Mr. Karthik A.V. has successfully published a paper ''Analytical investigation on energy separation in Ranque – Hilsch vortex tube'' in UNHB: Numerical Heat Transfer, Part B: Fundamentals, DOI:10.1080/10407790.2021.1969816.-INTERNATIONAL JOURNAL.

Nayak, V., Karthik, A. V., Sreejith, B. K., Prasad, B G. and Kini, K. S presented paper titled "Performance, combustion and emission characteristics of single cylinder CI engine with WCO biodiesel and nanoparticles." *in* 3rd International Conference (online) onon Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering (SME-2021), 2021 held during 19th and 20th November 2021, NMAM Institute of Technology, Karnataka, India.

NATIONAL/INTERNATIONAL CONFERENCES

Vighnesha Nayak attended and presented a research paper in 3rd International Conference (online) on Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering (SME-2021), 2021 held during 19th and 20th November 2021, NMAM Institute of Technology, Karnataka, India.

FDP/WEBINAR/SEMINARS/TRAINING

Mr. Sunil Kumar S has participated in AICTE Training and Learning Academy FDP on "Electric Vehicles" from 04-10-21 to 08-10-21.
Dr. Sreejith B K served as chairperson in the 3rd International Conference (online) on SME 2021 held during 19th and 20th November 2021, NMAM Institute of Technology, NITTE.
Dr. Sreejith B K conducted a bridge course on ' Challenges and opportunities in Mechanical Engineering" for 2021-2025 batch students.
Nayak, V., Karthik, A. V., Sreejith, B. K., Prasad, B. G. and Kini, K. S presented paper titled "Performance, combustion and emission characteristics of single cylinder CI engine with WCO biodiesel and nanoparticles." *in* 3rd International Conference (online) onon Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering (SME-2021), 2021 held during 19th and 20th November 2021, NMAM Institute of Technology, Karnataka, India.
Dr. Sreejith B K received acceptance notification on 07/11/2021 about his manuscript "Numerical Investigation on the Effect of Leading-Edge Tubercles on the Laminar Separation Bubble" from Journal of Applied Fluid Mechanics.
Dr. Vighnesha Nayak conducted a bridge course on ' Challenges and opportunities in Mechanical Engineering" for 2021-2025 batch students.
Dr. Vighnesha Nayak completed of 5 days Faculty Development Program- Student Induction on UHV conducted online during 13-17 September, 2021.
Mr. Sudheer Kini K presented research Paper entitled "Bending Deflections and Natural Frequencies of Micro/Nano Beams Using a Third Order Single Variable Nonlocal Beam Theory" in the First International Conference on Structures, Material and Construction held at Jaypee University of

Information Technology, Waknaghat, Solan, Himachal Pradesh, India during 12th – 13th November 2021.
Sudheer Kini K presented research Paper entitled "Bending Deflection Solutions of Thick Beams Using a Third Order Simple Single Variable Beam Theory" in the First International Conference on Structures, Material and Construction held at Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, India during 12th – 13th November 2021.

STUDENT ACHIEVEMENTS

TECHNICAL EVENTS

Mr. Jacob Antony, Mr. Ebin Antony, Dr. Sreejith B K has successfully published a paper ''Holistic Review of Smart Manufacturing in Industry 4.0'' in Journal of Huazhong University of Science and Technology ISSN-1671-4512.-INTERNATIONAL JOURNAL on July 2021.
Mr. Jacob Antony, Mr. Ebin Antony has successfully published a paper 'HVAC Design and Operation for Green School Building'' in International Journal of Innovative Research in Science, Engineering and Technology e-ISSN: 2319-8753, p-ISSN: 2320-6710, Impact Factor: 7.512, Volume 10, Issue 5, DOI:10.15680/IJIRSET.2021.1005153 on May 2021.

NATIONAL BOARD OF ACCREDITATION (NBA)

What is accreditation?

Accreditation is a process of quality assurance and improvement, whereby a programme in an approved Institution is critically appraised to verify that the Institution or the programme continues to meet and/or exceed the Norms and Standards prescribed by regulator from time to time. It is a kind of recognition which indicates that a programme or Institution fulfills certain standards.

Why accreditation?

The purpose of the accreditation by NBA is to promote and recognize excellence in technical education in colleges and universities - at both the undergraduate and post graduate levels. Institutions, students, employers, and the public at large all benefit from the external verification of quality provided through the NBA accreditation process. They also benefit from the process of continuous quality improvement that is encouraged by the NBA's developmental approach to promote excellence in technical education. Through accreditation, the following main purposes are served:

- Support and advice to technical institutions in the maintenance and enhancement of their quality of provision.
- Confidence and assurance on quality to various stakeholders including students.
- Assurance of the good standing of an Institution to government departments and other interested bodies.
- Enabling an Institution to state publicly that it has voluntarily accepted independent inspection and has satisfied all the requirements for satisfactory operation and maintenance of quality in education.

Impact of accreditation

The purpose and impact of accreditation goes far beyond quality assurance of an Institution and its programs. Major impacts of accreditation system are summarized below:

- Encourages quality improvement initiatives by Institutions.
- Improves student enrolment both in terms of quality and quantity.
- Helps the Institution in securing necessary funds.
- Enhances employability of graduates.
- Facilitates transnational recognition of degrees and mobility of graduates and professionals.
- Motivates faculty to participate actively in academic and related Institutional/departmental activities.
- Helps create sound and challenging academic environment in the Institution, and Contributes to social and economic development of the country by producing high-quality technical manpower.

Benefits and Significance of Accreditation

Accreditation is a tool that stakeholders use to monitor, assess and evaluate the standards and quality of the education a student receives at a college, university or other institution of higher learning. Some of the major benefits enrolled students receive by attending an accredited institution/program are as follows:

- Accredited institution/program offers the highest quality education available;
- Accredited institution/program strengthens consumer's confidence, employers value degrees of an accredited program the most;
- Accreditation helps institutions to know their strengths, weaknesses and opportunities, pushes them to continuously improve their programs and give them a new sense of direction, identity and targets and
- Accredited institution/program demonstrates accountability to the public, commitment to excellence and continuous quality improvement

Who Gets Accredited?

Individuals, courses, and institutions are not accredited. NBA only accredits programs in Engineering, Computer Application, Pharmacy, Management, Hotel Management and Catering Technology.

Accreditation Policy

General Information on Accreditation

The following general policies are the guiding principles for accreditation of programs offered by various technical institutions:

i) NBA accredits selected technical Programs of institutions and not the Institutions or its Departments / Centres as a whole.

ii) Institutions are invited to apply for accreditation through eNBA portal as per norms prescribed by NBA from time-to-time.

iii) Programs to be accredited should be offered by an educational Institution, which has been formally approved by the AICTE or the concerned regulatory authority.

iv) Programs from which at least two batches of students have graduated are considered for accreditation. The program should continuously be running without break with approval of the concerned regulatory authority during the whole duration of last two batches (for example: 5 years for UG engineering, 3 years for PG engineering, etc.).

10 OF THE GREATEST MECHANICAL ENGINEERING INNOVATIONS THAT HAVE DEFINED MECHANICS AS WE KNOW IT

Mechanical engineering is one of the broadest engineering disciplines that more or less covers anything that moves. The broadness of its scope is due to the fact that it encompasses the design and manufacturing of all components in a moving system. This means that from the smallest parts to the machine as a whole, it all falls under the same umbrella of "mechanical engineering".

GEARS AND COGWHEELS

These are integral components of any rotating speed which needs the ability to change speed, torque or the direction of the power source. The gear and cog are two of the most fundamental mechanical innovations in history, and without them, we'd certainly be out of business. So, how does it work? A change in torque utilising gears and cogwheels creates a mechanical advantage thanks to 'gear ratios'. A gear meshes with a linear toothed object called a rack, which produces rotation. Many items from bicycles to gearboxes utilise this innovative design trait today.

WHEEL AND AXLE

There are not many innovations which are as widely recognised as being as influential as the wheel and axle, think about the phrase "Don't reinvent the wheel". These are essential in the modern world. The wheel and axle is part of the 'six simple machines' group, which was defined in antiquity and expanded upon, during the Renaissance. The first depictions of the wheel appeared on a Bronocice pot from Poland. This pot is from around 4000 BC, but the earliest actual evidence of the wheel and axle comes from Slovenia and dates back to around 3360-3030 BC.

SPRING

Springs are defined as elastic objects capable of storing mechanical energy. They tend to be made of steel and come in coiled form, and when stretched or compressed, they exert an opposing force proportional to the change in length. First seen around 15th Century in the form of the bow, they now appear of almost every motor vehicle.

ELECTRICAL MOTORS

Electric motors are machines which convert AC or DC current into movement. These motors often work via the use of magnetic fields and winding currents, which create a force. The principle behind these motors is Ampere's Force Law. First described by Ampere in 1820 and first demonstrated by Michael Faraday in 1821, it took another 7 years for the first practical motor to be created by a Hungarian physicist, Anyos Jedlik. In modern society, they're found everywhere in many things from electric hand tools to vacuum cleaners to starter motors on cars.

PULLEYS FOR LIFTING

A pulley is one or several wheels that are on an axle supporting the change of direction of a cable. This ingenious invention transfers power between the shaft and cable providing an amazing amount of mechanical advantage, often used to help lift heavy objects. Again, the pulley is one of the 'six simple machines' as originally identified by the great Heron of Alexandria. Pulleys are now an integral part of many systems today, included fan belts, engines, flag poles, elevators and water wells.

STEEL

While steel has been known about since the beginning of the Iron Age, the quality of the iron produced has varied greatly over the millennia. The first furnaces date back to around 6th century BC in China and slowly began spreading to Europe in the Middle Ages. During the 17th century, iron became much better understood, and by the 19th century, iron production methods had greatly improved, as had the quality of the metal produced. The most important development in the production of high-quality steel would come in 1856 when Henry Bessemer found a way to use oxygen to reduce carbon content, making it much stronger than previously.

SCREWS

Screws are again one of the 6 simple machines, which are usually made of a cylindrical rod with a spiralling helical ridge on the outside. This ingenious innovation converts rotational motion into linear force. A short and sweet explanation for one of the most useful mechanical engineering innovations which have changed the modern world as we know it.

BEARINGS

Mechanical engineering owes a lot of its advancement to this invention. The bearing allows objects to be in one constant motion or plane whilst simultaneously reducing friction. They come in many shapes and different sizes, but the theory remains the same for all. The most common bearings are those found in bicycle wheels or car wheels.

RECIPROCATING ENGINE PISTON

It's 1690 AD and French physicist Denis Papin is going to change history forever with his design. Originally designed as a steam engine piston, it was later built upon by Thomas Newcomen and James Watt during the 18th Century. This began the beginning of the industrial revolution. A piston is a cylindrical object, contained within another cylinder, that is made airtight by the use of sealing rings. In the modern combustion engine, the pistons transfer energy to the crankshaft.

LEVERS FOR LEVERAGE

The lever is another simple engine, which is made up of a beam which pivots of a fulcrum. Levers make lifting objects incredibly easy with a mechanical advantage, depending on where the fulcrum is located. There are generally 3 types of levers, class 1, 2 and 3. Class 1 is where the fulcrum is located in the centre of the beam (similar to a see-saw). Class 2 levers are where the load is located (just like a wheelbarrow) and class 3 is where the most effort is in the middle. Think tweezers or a human jaw.

[Source : https://www.primeengineering.com.au/10-greatest-mechanical-engineering-innovations]

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