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Department of
Mechanical
Engineering

Volume III, Issue I

July 2017 to June 2018
Annual Newsletter

www.abes.ac.in

Message from Director

Prof. Gajendra Singh



It gives me immense pleasure to congratulate Faculty, Staff, and Students of Mechanical Engineering department for publishing 1st Issue of the Volume III Newsletter. It will definitely help to showcase the activities that are happening in the department. It also helps in building up teamwork which is very much needed today in the world of competition. It provides a platform for exposing the merits, academic achievements and contributions of the faculty members as well as students of the department. This enhances the documentation culture of the institute. This would definitely create an impact in the minds of readers, by way of providing larger visibility and dimension to the department. I hope that this culture of releasing Newsletter continues and becomes a quoted example for all others to follow.



Message from HOD

Prof. R.K. Shukla

Welcome and best wishes to all the students, faculty and staff members. It has been an interesting and busy semester for members of the department. The Department of Mechanical Engineering has recorded consistent improvement in its academic, research and placement performance. This newsletter is one of the ways in which we can disseminate information on the life of the Department. The past semester was full of various activities by the students and faculty in academic, co-curricular, extra-curricular as well as research & developments.

In the era of engineering and technology, this newsletter will motivate the teachers and students of sharing their creativity and new ideas with the world and will help in their overall development. I wish best of luck for all the team members for publication of the newsletter. I would like to thank all my colleagues for their tireless efforts to help the department progress at a very steady pace.

Message from Editor

Ms. Gaganpreet Kaur
Associate Prof. (ME)



"Hard work" isn't physical—it's emotional. By Jack Busch

Hard work is nothing but one of the ways you can achieve your goals. For those of us who aren't inordinately wealthy, smart, or lucky, it's the only way. While each person's path to success will be unique, the anatomy of the hard work required to be done by individuals, often looks very similar. For most successful people, the hard work that they put forth includes all of the following:

1. **The Drive** – This is the motivation, the inspiration, the entire reason behind the work hard. This is the engine that pushes your efforts forward.
2. **The Plan** – If the drive is the heart of your hard work, then the plan is the skeleton. The plan maps out your course of action and helps plot your progress and keep you on track.
3. **The Grind** – The Grind is the point when working hard stops being fun and exciting and starts becoming tedious, stressful and perhaps even discouraging. How you handle the grind is often what separates the winners from the quitters.
4. **The Sacrifice** – This is the crux of hard work, and the one thing that makes hard work truly hard. Any ambitious goal requires significant personal sacrifice. Enduring the strain in your relationships, finances and comfort level is the real test.
5. **The Payoff** – This is the brass ring. In order for hard work to be worthwhile, you have to define a number of goals and milestones and recognize when you've achieved them. And once you do, you have to up the ante and keep going. So this 2017-18 edition is dedicated to hard working faculty members of Mechanical Engineering Department who have put in their best efforts to bring the laurels to the department.



Vision

To create globally competent mechanical engineers capable of working in an interdisciplinary environment, contributing to society through innovation, entrepreneurship and leadership

Mission

- M1: To provide excellent teaching learning environment.
- M2: To create supportive surroundings for innovative research, and develop capabilities to analyze interdisciplinary engineering problems.
- M3: To inculcate ethical values and leadership qualities to produce successful professionals.
- M4: To promote Industry-Institute relationship.

Program Educational Objectives (PEOs)

PEO1: To apply basic science and engineering knowledge, critical thinking across the disciplines and emerging areas of mechanical engineering for higher studies, research and employability to handle real life problems.

PEO2: To inculcate communication skills, ethical conduct and understand legal and cultural aspects to serve the society.

PEO3: To develop managerial skills, team spirit, leadership qualities and engage in lifelong learning for a successful professional career.

PEO4: To strengthen their ability to adopt technological changes for developing innovative and sustainable solutions considering health, safety and environmental aspects.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Mechanical Engineering Program at ABESEC will be able to:

PSO1: Empower students to apply their practical skills and knowledge in major streams such as thermal, design, manufacturing and

industrial engineering.

PSO2: Prepare students for building their career in different industries or pursue higher studies in mechanical engineering and able to solve interdisciplinary problems along with values and professional ethics.

PROGRAMME OUTCOMES (POs) (by NBA)

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering

problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply 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.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO 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.



Conferences Organized/Attended

- ❖ Department of Mechanical Engineering had organized an International conference on advances in business and engineering for sustainability (ABES-2018), in association with Department of Electrical and Electronics Engineering and Department of Business Administration. The two days conference was scheduled from 27th to 28th March 2018, in which we received an overwhelming response from researchers from various national and international institutes. After reviewing all the papers, a total of 95 full length papers were selected for presentations and published by UGC approved journals.



Conference (ABES-2018)



Conference (ABES-2018)

- ❖ Mr. Ravi Shankar Raman (Sr. Asst. Professor) research paper titled "DMAIC Approach for Road Well-being: A Case Study" was accepted in "[International Conference on Recent Trends in Engineering & Sciences](#)" on 10th and 11th Feb-2018 and AIP-ICRTES conference Proceeding is indexed by Scopus (Elsevier).

- ❖ Mr. Ravi Shankar Raman (Sr. Asst. Professor) research paper titled "A Six Sigma application for the reduction of defects in a capacitor manufacturing process: A case study", was Presented in International Conference on Recent Advances in Materials, Mechanical on 1st & 2nd June 2017 and Conference Proceeding is accepted for publishing in Applied Mechanics and Materials Journal (Abstracted/Index in SCImago Journal & Country Rank (SJR)).



MOU Signed on Academic Research with BITS Vizag

- ❖ An International workshop was organized on Thermal Engineering in May 2018 by Department of Mechanical Engineering. It was organized by Thermal research group. The workshop was conducted by Dr. Andrey V. Kuzmin (Associate (Lead) Editor - International Journal of Energy for a Clean Environment) from Ukraine. All the faculty members under thermal group and interested students attended the workshop.
- ❖ On March 27, 2018 department of Mechanical Engineering organized a workshop on the topic "Tips & Techniques to publish International research publication" for all the attendee of ABES-2018. In this workshop Prof. Md. Mamun Habib (BRAC University, Dhaka, Bangladesh) enlightened the participants about writing research papers, book chapters etc.
- ❖ Mr. Manabendra Saha (Sr. Asst. Professor) attended workshop on Composite Material in Engineering Application: Design and Manufacturing Prospective at IIT Mandi in Jan 2018
- ❖ Mr. Manish Mangal (Asst. Professor) attended QIP Short Term Course On Computational Method On Fluid Mechanics And Heat Transfer at IIT ROORKEE in 19-23 Feb 2018

- ❖ Prof.(Dr.)Yogesh Chandra attended 2 days workshop on Power Plant Engg by NPTI, New Delhi for Final year students.
- ❖ Prof.(Dr.)Ashish Malik attended two days workshop on Outcome Based Education at AKTU, Noida Campus.
- ❖ Dr. Kishore K Guru and Ms. Monika Chauhan attended an FDP on “Manufacturing world and its future” at JSS Academy of Technical Education, Noida from Apr 23-28, 2018.
- ❖ Ms. Monika Chauhan attended 1- week short term course in “CFD - Multi-Phase flow in Miniature applications” at IIT Roorkee, June, 2018.
- ❖ One week faculty development program on “Reconfigurable Manufacturing System: Research Potential” was organized July 2 – July 6, 2018 sponsored by Dr.APJ AKTU under TEQIP-III scheme. This FDP was organized by head of department Prof. (Dr.) Rajendra Kumar Shukla (HoD, ME), Dr. Kishore Kumar Guru (Associate Professor) and Ms. Gaganpreet Kaur (Associate Professor).
- ❖ One week faculty development program on “Outcome Based Education: Teaching, Learning & Evaluation” was organized June 18 – June 22, 2018 sponsored by Dr. APJ AKTU under TEQIP-III scheme. This FDP was organized by head of department Prof. (Dr.) Rajendra Kumar Shukla (HoD, ME) and Prof. (Dr.) Ashish Malik.
- ❖ One week faculty development program on “Computational Fluid Dynamics” was organized June 4 – June 8, 2018 sponsored by Dr.APJ AKTU under TEQIP-III scheme. This FDP was organized by head of department Prof. (Dr.) Rajendra Kumar Shukla (HoD, ME) and Prof. (Dr.) Dharmendra Singh (A-HoD, ME).
- ❖ Prof.(Dr.)Yogesh Chandra Attended 8 days workshop on “Human Values and Professional Ethics”, Level - I from 18-25 May, 2018 in IITK.

6 weeks Technology based Entrepreneurship Development Programmes (TEDP)

conducted - 11.01.2018 to 21.02.2018

Keeping the needs and importance of entrepreneurship and innovation in economic development & growth of the country, Mechanical Engineering Department and ABESEC Startups Lab was jointly organized 6 weeks Technology based Entrepreneurship Development Programmes (TEDP) on **“Industrial Component Designing”**.

The programme was designed in such a manner that it would provide entrepreneurial skills along with technical skills on the identified trades. During 2 weeks entrepreneurial training the participants are exposed about various content like Development of Entrepreneurial Behaviour, Business Idea selection process, POC, Prototype and final product development, Launching of own startup, Business incubation support system for startups, IPR (patent, copyright management, financial management etc.), Funding support for your 1st enterprise, Industry visit and interaction with SMEs.

The objective of programme was to develop participants as techno-entrepreneurs (technology based startups) and help the institution to uplift their business incubation process, as the trained participants may join the business incubator set by your institution.

Shri Vijay Kumar Director, MSME-DI, New Delhi and Shri M K Sharma, Asst. Director, MSME-DI were the chief guests of the valedictory function.

The above program is sponsored by Department of Science & Technology, Govt. of India under DST-NIMAT Project 2017-18 and a financial support has been received from the ministry to conduct the program.

Sh. Sachin Goel,
V.C. ABES EC welcoming
Sh. Himanshu Gautam,
ADM, City during inauguration ceremony of TEDP



Guest Lectures

- ❖ A guest lecture was organized for the faculty members of Mechanical Engineering Department on the topic “IPR and its benefits for academicians and institution” on 22 Dec 2017. The lecture was delivered by Mr. Govind Sharma, from National Research Development Corporation (An Enterprise of DSIR, Ministry of science & Technology, Government of India).
- ❖ A guest lecture was organized for the faculty members of Mechanical Engineering Department on the topic “How to write a good quality research article” on 30 Dec 2017. The lecture was delivered by Dr. Sanjay Sen Gupta, Principal Scientist, NISCAIR, (Ministry of Science & Technology, Government of India), New Delhi.
- ❖ A Guest lecture on “Processing of Green Composites by Microwave Energy” was conducted by Mr. Manabendra Saha (Sr. Asst. Professor, ABESEC) on 02 Feb 2018.
- ❖ An interactive Hangout Session for NCER (NOE-081) was conducted by Prof. Prathap Haridas on 6th April, 2018.
- ❖ A Guest Lecture was conducted for final year students on 16th April, 2018, on the topic “Welding Practice in Industrial Application”. This lecture was delivered by Mr. S. K. Bhandari (Former HOD, Department of Mechanical Engineering at United College of Engineering & Research, Gr. Noida).
- ❖ One week AICTE recognized short term course on “Advance Manufacturing Methods” through ICT was organized in Sponsored by NITTTR Chandigarh from March 5- March 9, 2018. This short term course was organized by Mr. ManabendraSaha (Sr. Assistant Professor).
- ❖ One week AICTE recognized short term course on “Modelling and Simulation using MATLAB” through ICT was organized in Sponsored by NITTTR Chandigarh from Jan 22- Jan 26, 2018. This short term course was organized by Mr. ManabendraSaha (Sr. Assistant Professor).
- ❖ One week AICTE recognized short term course on “Renewable and Clean Energy Technologies” through ICT was organized in Sponsored by NITTTR Chandigarh from Nov 13- Nov 17, 2017. This short term course was organized by Prof. (Dr.) Ashish Malik.

- ❖ One week AICTE recognized short term course on “Product Design and Development” through ICT was organized in Sponsored by NITTTR Chandigarh from Nov 6- Nov 10, 2017. This short term course was organized by Mr. ManabendraSaha (Sr. Assistant Professor).

Research Publication.

1. Dharmendra Singh, Abhishek Sharma, C. Vivekanandhan, Yashvir Singh, Ibrahim Mustefa, Sintayehu Assefa, Seleshi Tilahun, (2018) “EXPERIMENTAL INVESTIGATIONS ON THE INFLUENCE OF FUEL PRESSURE ON SINGLE CYLINDER C.I. ENGINE FUELLED WITH DIFFERENT POLANGA BIODIESEL BLENDS”, *Journal of Aerospace Engineering & Technology*, volume 8, Issue 2, 58-66.
2. Shukla, RK (2017), “DESIGN AND TESTING OF A LIQUID - VAPOUR PHASE CHANGE HEAT ACTUATOR” IJRTI - International Journal for Research Trends and Innovation.
3. Singh, D (2017), “CONDITION BASED MONITORING & FAULT DIAGNOSTIC OF A MACHINE” journal of experimental& applied mechanics, Volume 9, Issue 2, 2230-9845 (online) 2321-516X (Print)
4. Singh, D, “PVC Water Tank & Slurry Cleaning Machine”
5. Malik, A, Harshana Gupta, Gaurav Chaudhary, Krishna Mohan Singh, Devendra Kumar (2018) “APPLICATION OF INDUSTRIAL ENGINEERING TO INCREASE THE PRODUCTIVITY OF AN E-RICKshaw FACTORY” International Journal of trend in scientific Research and Development(IJTSRD),, Volume 2, Issue 2, 2456-6470.
6. Kaur, G, Gayatri Devi, Abhishek Kumar Mishra, Amarnath Kumar, Akarsh Mishra, Aditya Arahari (2017), “OPTIMIZATION OF LAYOUT AND SCHEDULING IN FMS” International Journal of trend in scientific Research and Development (IJTSRD), Volume- 1, Issue-6, 2456-6934
7. R.S Raman, Himanshu Chauhan, Ankit Negi (2018), “DMAIC APPROACH FOR ROAD WELLBEING: A CASE STUDY” International Conference on Recent Trends in Engineering and Science, Volume-07, 8-11

8. R.S Raman, Yadavalli Basavaraj (2019), "REDUCTION OF DEFECTS IN A CAPACITOR MANUFACTURING PROCESS THROUGH SIX SIGMA CONCEPT: A CASE STUDY" International Journal of six sigma and Competitive Advantages, ISSN 1923-9343(online)ISSN 1923-9335(Print) Volume 9 Issue 2, PP-253-260.
9. Sharma, NK (2018), "AUTOMATIC DRAIN CLEANER" International Journal of Innovative Sc.& Research Technology. ISSN no.2456-2165,Volume 3,Issue 6.
10. Saha, M, Amber Srivastav, Amankansal, Devansh Dhar Dubey, Agam Srivastava (2017), "TRI-WHEELER STAIR CLIMBER" International Journal of Trend in Scientific Research and Development (IJTSRD), 2017, ISSN No.2456-6470, volume 2 Issue 4.
11. Saha, M, Shubham Sachdeva, Shubham Signhal, Navneet Singh, Saurabh (2017), "AUTOMATED STORAGE AND RETRIEVAL SYSTEM" International Journal of Innovation and Research Technology (IJISRT), Volume 3, Issue 5, ISSN No.2456-2165
12. Pandey A Ashish Kumar Anshule Garg, Amit Pathak, Ankesh Pratap, Anoop Pandey (2017), "DESIGN AND ANALYSIS OF WELDING ELECTRODE COATING DIE AND SET UP FOR COATING OF FLUX ON SS308 COREWIRE" Mat Journal, Volume- 4 , Issue 2, PP 1-5
13. Rajoria, C, Deepali Gautam, Harsh Rajput, Abhinav Vats (2017), "DESIGN AND FABRICATION OF A FOOT OPERATED WASHING MACHINE" International Journal of Trend in Scientific Research and Development (IJTSRD), ISSN No. 2456-6470, Volume-2 Issue- 4.
14. Goel, AK Vikram Singh (2017), "THERMAL EFFICIENCY OF RETURN FLOW SOLAR AIR HEATER" Journal of Refrigeration, Air Conditioning, Heating and Ventilation, ISSN No. 2394-1952 (online) Volume-4, Issue -3
15. Goel, AK Vikram Singh (2017), "EFFECTIVE EFFICIENCY OF RETURN FLOW SOLAR AIR HEATER" Journal of Refrigeration, Air Conditioning, Heating and Ventilation, ISSN-2394 (online), Volume-4 Issue-3
16. Kumar, N, Shivam Tyagi, Vaibhav Prajapati, Saurbh Kumar (2017), "THERMAL IMAGING BASED RESEARCH OPERATION USING DRONE" International Journal of Trend in Scientific Research and Development (IJTSRD), ISSN-456-6470, Volume-2, Issue -4
17. Kumar, N. Shivam Tyagi, Vishal Tripathi (2017), "PROTOTYPE OF AUTOMATIC FAN" International Journal of Trend in Scientific Research and Development (IJTSRD), ISSN No. 2456-6470, Volume-2 Issue-4
18. Manish Saraswat, Nathi Ram Chauhan (2018), "BIO PHYSIOCHEMICAL ANALYSIS OF ALGAE-GASOLINE AND BUTANOL-GASOLINE BLENDED FUELS" Journal of Energy, Environment & Carbon Credits. ISSN- 2249-862, Volume- 8, Issue-1
19. Manish Saraswat, Nathi Ram Chauhan (2018) "PERFORMANCE AND EMISSION ANALYSIS OF DIFFERENT ALCOHOLIC-BLENDED FUELS IN SPARK-IGNITION ENGINES" Journal of Energy, Environment & Carbon Credits. ISSN 2230-7982 (Online), 2321-5186(Print)
20. Jitendra Mehta, Yogesh Chandran, R. P. Tewari (2018) "THE USE OF DIELECTRIC ELASTOMER ACTUATORS FOR PROSTHETIC, ORTHOTIC AND BIO-ROBOTIC APPLICATIONS" International Conference on Robotics and Smart Manufacturing
21. A.K. Goel, SN Singh (2017) "THERMAL PERFORMANCE OF SOLAR AIR HEATER USING JET IMPINGEMENT TECHNIQUE WITH LONGITUDINAL FINS" Journal of Scientific and Industrial Research. Volume 76, PP 780-784

Professional bodies

- ❖ Mr. Anoop Pandey (Sr. Asst. Professor) renewed his enrollment in professional bodies "International Association of Engineers (IAENG)", Society of Automotive Engineers (SAE), Institutions of Engineers (India) IE(I).
- ❖ Dr. Kishore Kumar Guru (Associate Professor) enrolled as a life member in Indian Association of "Nano Science and Nanotechnology" and in "Institute of Research Engineers and Doctors".
- ❖ Ms. Monika Chauhan is an active enrolled member of American Wind Energy Association (AWEA), SWE (Society of Women Engineers), AIAA (American Institute of Aeronautics and Solar Energy Society of India (SESI))



Feather in the cap

- ❖ Mr. Manabendra Saha (Sr.Asst. Professor), Mr.Saurabh Awasthi (Sr. Asst. Professor) Mr. Neeraj Sharma (Sr. Asst. Professor), Mr.Chetan Rajoria (Asst. Professor) and Mr.Vaibhav Sharma (Asst. Professor) enrolled in PhD program in Department of Mechanical Engineering at NIT Kurukshetra.
- ❖ Mr. Naveen Kumar (Asst. Professor) and Mr. Manoj Kumar (Sr.Asst. Professor), enrolled in Ph.D. Program in Department of Mechanical Engineering at DTU, Delhi.
- ❖ HOD ME distributed cheques among the meritorious students in the session 2017-18.
- ❖ Prof. (Dr.) Abhinav Gupta along with their thermal research group opened the Student Chapter of Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) | June, 2018 (Friday).The program was honored with the presence Mr. Subir Das (President,ISHRAE).
- ❖ Prof.(Dr)Abhinav Gupta was appointed as reviewer of papers for the International Conference, FLAME 2018 to be held at AMITY UNIVERSITY,Noida.
- ❖ Dr. Kishore K Guru was appointed as a member of technical committee in Conference SWAYAM-2018, held in July 2018, organized by BITS Goa campus in association with Indian society of applied mechanics.
- ❖ Prof. (Dr.) R. K. Shukla (HoD, ME), Prof. (Dr.) Ashish Malik and Prof. (Dr.) Dharmendra Singh (A-HoD, ME) were granted Rs. 220000/- from AKTU for FDP on Reconfigurable Manufacturing System: A Research potential, Outcome based education and Computational Fluid Dynamics.
- ❖ Mr. R.S. Raman (Sr. Asst. Professor) got Best Mentor Award for project Reshaping flight for fuel economy in Simulation & Scale Model Category on 17 Feb 2017 in competition Technomemtum 2017.



FDP - Reconfigurable Manufacturing System



Oath taking ISHARE chapter inauguration



AP-EXPO 2018



Cheque distribution to best academic performers



FDP - Outcome Based Education

- ❖ Prof.(Dr)Ashish Malik and automobile research group opened the Student Chapter of Solar Energy Society of India on 11 April 2018.It was a privilege to have with us **Mr.Ajay Prakash Srivastava** President of Solar Energy Society of India (SESI) for the ceremony.
- ❖ Prof. (Dr.) Yogesh Chandra and Mr. Naveen Kumar (Asst. Professor) organized Skill Development Program on "Familiarization of power generation: Coal, Hydro and Gas" in collaboration with National Power Training Institute-Northern Region, Badarpur Thermal Power Station, NTPC, New Delhi (Ministry of power ,government of India) on 7th,8th and 9th march,2018.
- ❖ Ms.Gaganpreet Kaur (Associate Professor),Dr.Kishore K Guru (Associate Professor),Mr.Navendra Pratap Singh (Sr.Asst. Professor) and Mr. Manish Mangal (Asst. Professor) organized "Project Expo-2018", at ME Deptt, ABESEC. The event included the display of project posters,project working models, and the research publications from the student's projects. The assessment of these projects under different categories based on outcome based learning was done by honorable guests from Academia and Industry.
- ❖ Mr.Anoop Pandey (Sr.Asst.Professor) organized SAE convention on 12th September 2017. "**SAE Student Convention**" is an event which exhibit amalgamation of applied technical research and academic research synergies by the means of products/projects and technical research papers respectively. Under this event various categories were planned like project/product exhibition and competition, technical research paper meet, technical lectures form eminent industry personnel and industry-academia panel discussion.



SAE Student Convention



ICT based FDP - Product Development & Design



AP-Expo 2018



International Workshop on Tips & Techniques
to publish International Research Publication



Patents Applied

Name of Innovators: Mr. Mahendra Kumar Gupta, Mr. Ravi Shankar Raman (Sr. Asst. Professor), Aditya Vaish, Abhiraj Kasana, Harshit Dhiman, Harsh Chaudhary

College Name: ABES Engineering College, Ghaziabad

Program: B.Tech

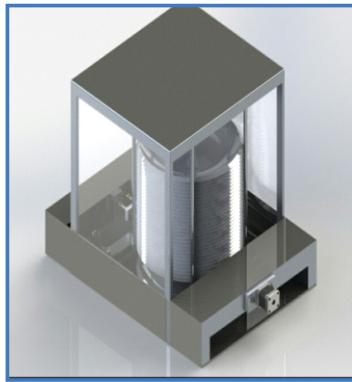
Branch: Mechanical Engineering

Year of Innovation: 2018

Patent No.: 201811026391

Innovation Name: Plate Dispensing Apparatus

Description: When organising large events such as parties, conferences and the like, it is common practice to arrange for catering services to manage the food services. This is primarily because catering to large functions requires substantial planning and execution which is a time consuming process. Additionally, if the services are not planned well, it results in either a shortage of food or a surplus causing wastage.



Name of Innovator: Mr. Anoop Pandey (Sr. Asst. Prof.), Dept of ME

College Name: ABES Engineering College, Ghaziabad

Program: B.Tech

Branch: Mechanical Engineering

Year of Innovation: 2018

Patent No.: 201811022491

Innovation Name: Apparatus For Making Welding Electrodes

Description: Defects like undercutting, spattering, bubble intensity, hydrogen embrittlement etc. have a strong relationship with the flux material used in coating the electrode wires. Such defects can be well controlled using optimum composition and constituent of flux material. These compositions can be varied well to attain the desired results and observe reduction in aforesaid defects. A portable set up for preparing the flux cored welding wires specially for welding austenitic stainless steel of 18/8 types such as AISI 301, 302, 304, 305 and 308 can be fabricated using manual feeding and collecting system.



Patents Applied

Name of Innovators: Aditya Vaish, Abhiraj Kasana, Harshit Dhiman, Harsh Chaudhary

College Name: ABES Engineering College, Ghaziabad

Program: B.Tech

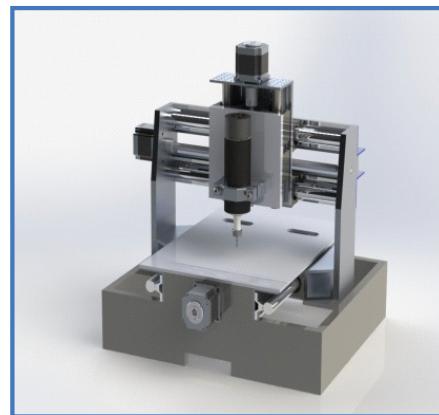
Branch: Mechanical Engineering

Year of Innovation: 2018

Patent No.: 201811032530

Innovation Name: Engraving Machine for Artisans

Description: Computer Numerical Control (CNC) router is a computer-controlled cutting machine related to the hand-held router used for cutting various hard materials, such as wood, composites, aluminium, steel, plastics, glass, and foams. CNC routers can perform the tasks of many carpentry shop machines such as the panel saw, the spindle moulder, and the boring machine. They can also cut mortises and tenons. The CNC router helps in the thermoforming of plastics by automating the trimming process. CNC routers can help ensure part repeatability and sufficient factory output.



Name of Innovator: Mr. Mahendra Kumar Gupta, Mr. Ravi Shankar Raman, Ankit Negi, Himanshu Chauhan

College Name: ABES Engineering College, Ghaziabad

Program: B.Tech

Branch: Mechanical Engineering

Year of Innovation: 2018

Patent No.: 201811026392

Innovation Name: Adjustable Table for Infants

Description: Adjustable table for infant is an innovative product to meet out the needs of school going kids. Adjustable mechanism of the table provides complete flexibility to kids to adjust its height and angle as per use.

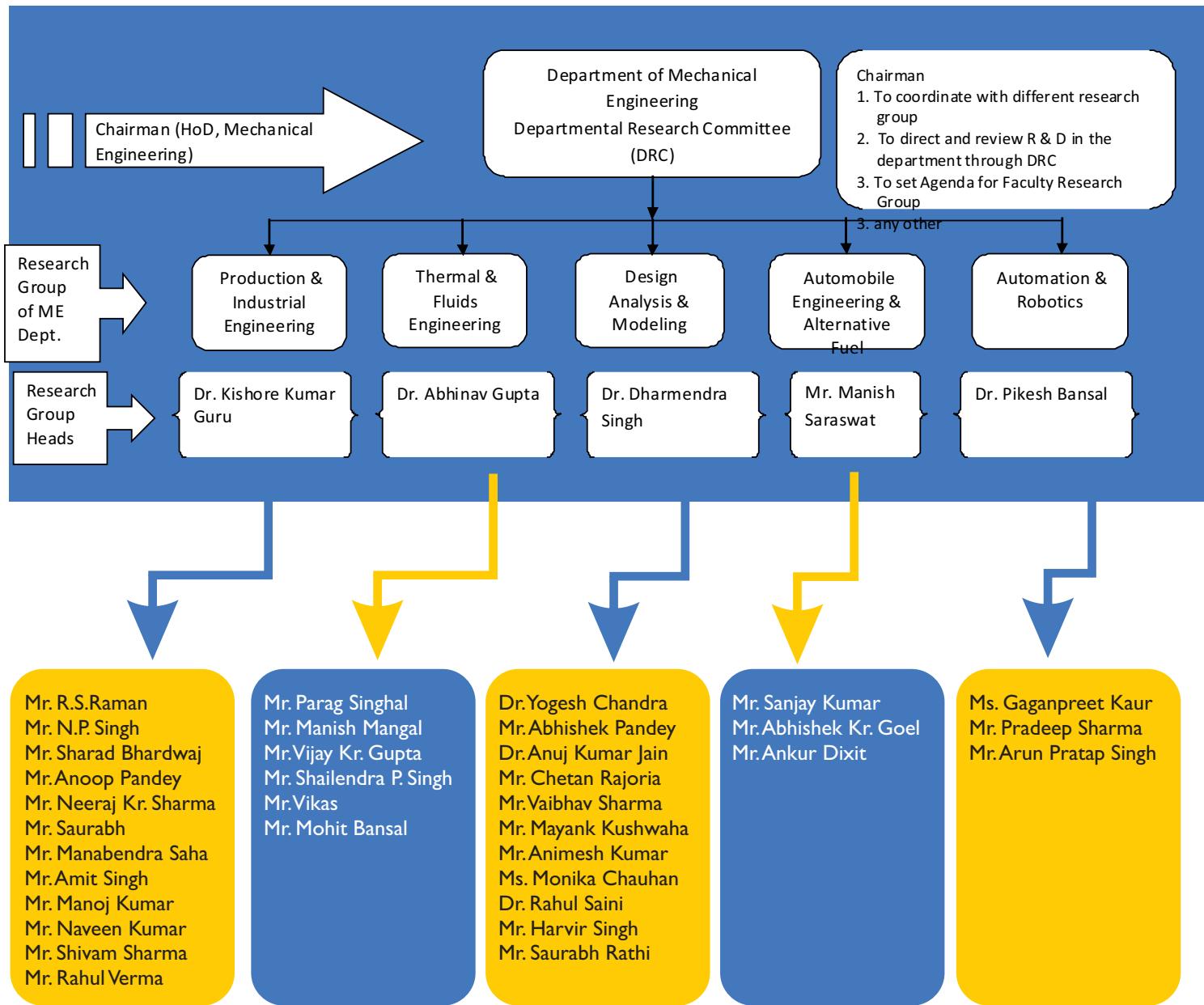


Industrial Visit

- ❖ An Industrial Visit was organized for B.Tech (ME), 2nd Year students at “YAKULT DANONE INDIA”, SONEPAT”. Yakult Danone India (P) Ltd is a 50:50 JV between Yakult Honsha, Japan and GroupeDanone of France, both of which are global probiotic leaders. The JV was formed in 2005 to manufacture and sell probiotic products in the Indian market. Yakult, a probiotic drink was launched in India in 2007. Yakult is manufactured at an ISO 9001:2015, HACCP and OHSAS 18001:2007 certified manufacturing facility in Sonepat, Haryana in India.
- ❖ An Industrial Visit was organized for B.Tech (ME), 3rd Year (VI Semester) students at “Industrial Visit-PRAP Automotive Ltd.” Kasna, Surajpur. PPAP is a leading manufacturer of Automotive Sealing Systems, Interior and Exterior Automotive parts in India. The company was established in 1978 for the manufacture of custom made extrusion products. The company commenced the Automotive Parts Business in 1985 with the start of production of Maruti (Maruti Suzuki) cars in the Indian market.
- ❖ An Industrial Visit was organized for B.Tech (ME), final year students at “Autocomp Corporation Panse Pvt. Ltd., Rudrapur, Udhampur Singh Nagar-263153”. Autocomp Corporation Panse Pvt Ltd is a leading tier I automotive manufacturer catering to both Indian and global OEMs in the field of sheet metal body parts and assemblies, BIW modules, chassis frames and tubular assemblies, with backward integration through process design and manufacturing of dies and fixtures.
- ❖ An Industrial Visit was organized for B.Tech (ME), 3rd Year (VI Semester) students at “Continental Carbon India Limited (CCIL), Ghaziabad”. Continental Carbon India Limited (CCIL) was formed in October 2000 upon the acquisition by Continental Carbon Company (CCC),
- ❖ USA of the carbon black assets of Oriental Carbon & Chemicals Ltd. Since then the carbon black manufacturing facility in Ghaziabad, in the state of Uttar Pradesh, has been substantially refurbished.
- ❖ An Industrial Visit was conducted for the students of B.Tech (ME) 2nd Year at “MOTHER DAIRY, PATPARGANJ, NEW DELHI”. Mother Dairy the world's biggest dairy development program launched to make India a milk sufficient nation. Over the years, Mother Dairy has contributed significantly in achieving this objective through a series of innovations and programs. Today, Mother Dairy manufactures markets & sells milk and milk products including cultured products, ice creams, paneer and ghee under the Mother Dairy brand. The Company also has a diversified portfolio with products in edible oils, fruits & vegetables, frozen vegetables, pulses, processed food like fruit juices, jams, etc. to meet the daily requirements of every household.
- ❖ An Industrial visit was conducted for 3rd year B.Tech Students at “Khara Hydro Electric Power Station (UPJVNL) near Saharanpur, UP. Plant has installed capacity of 72 MW (3 x 24 MW), Power channel & tunnel has a capacity of 198 Cumecs with bed width of 10.5 meters. This plant is located in 13.087 km of power channel.



Faculty Members Research Groups



Department of Mechanical Engineering

Student Achievement Section

Research paper published by students

S. No.	Name		Title	Name of Conference/Journal	Issue and Volume
1	Shivam Gupta	1503240145	A Review on Effect of Aluminum and Silicon Powder on Response Variables in Powder Mixed EDM	Trends in Electrical Engineering	Volume 8 Issue 3
	Shubham Mehrotra	1503240154			
	Utkarsh Bhan	1503240166			
	Vaibhav Setia	1503240169			
2	Gaurav Chaudhary	1403240069	Application of Industrial Engineering to increase the productivity of an E-Rickshaw factory	International Journal of trend in scientific Research and Development (IJTSRD)	Volume-2 Issue4
	Krishna Mohan Singh	1403240086			
	Devendra Kumar	1403240063			
3	Shubham Sachdeva	1403240152	Automated Storage and Retrieval System	International Journal of Innovation and Research Technology (IJISRT)	Volume 3 Issue 5
	Shubham Singhal	1403240154			
	Navneet Singh	1403240098			
4	Ashish Kumar Chaurasia	1403240050	Design and Analysis of Welding Electrode Coating die and set up furcating of flux on SS308 core wire	Journal of Mechanical & Mechanics Engineering	Volume 4 No 2
	Anshul Garg	1403240043			
	Amit Pathak	1403221014			
	Ankesh Pratap	1503240902			
5	Deepali Gautam	1403240060	Design and Fabrication of a Foot Operated washing Machine	International Journal of trend in scientific Research and Development (IJTSRD)	Volume2 Issue4
	Harsh Rajput	1403240072			
	Abhinav Vats	1403240004			
6	Himanshu Chaunhan	1403240076	DMAIC Approach for Road Well-being: A case Study	International Conference on recent trends in engineering and Science	Volume 7 No 4
7	Divyansh Singh	1403240067	Optimization of fin and tube heat exchanger	International Journal of Innovation and Research Technology (IJISRT)	Volume 3 Issue 5
	Mayank Chauhan,	1403240090			
	Amandeep Singh	1403240027			
	Keshav Nath Chaturvedi	1403240083			
8	Peeyush Kr. Gupta	1503240114	Optimizing Milling Parameters in Face Milling Operation	Journal of experimental & applied mechanics	Volume 9 No 3
	Vipul Verma	1503240173			
	Ayush Goel,	1503240052			
9	Anshu Tiwari	1403240042	Performance and Emission Analysis of VCR Engine Using Waste Mustard Cooking Oil	International Journal of trend in scientific Research and Development (IJTSRD)	Volume-2 Issue-4
	Mayank Bajpai	1403240089			
	Harshita Goyal	1503240905			
	Ajshit Garg	1403240021			
	Aditya Kumar	1403240014			
10	Shivam Tyagi	1403240146	Proto type of automatic fan	International Journal of trend in scientific Research and Development (IJTSRD)	Volume-2 Issue-4
	Vishal Tripathi	1403240181			
11	Vikram Singh	1403240174	Thermal Efficiency of return flow solar Air Heater	Journal of Refrigeration, Air Conditioning, heating and ventilation	Volume 4 No 3
	Shivam Tyagi	1403240146			
	Vaibhav Prajapati	1403240172			
	Saurbh Kumar	1403240135			
12	Amber Srivastav	1403240030	Tri- Wheeler Stair Climber	International Journal of trend in scientific Research and Development (IJTSRD)	Volume-2 Issue-4
	Aman Kaushal	1403240026			
	Devansh Bhar Dubey	1403240062			
	Agam Srivastava	1403240017			
13	Suryansh Mishra	1703240140	Review on Four Wheel Steering System	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume 5 Issue4



Awards/ Participation of Students in National and International Events

S.No.	Participant Names	Roll No.	Title of event	Participated at	Date	Awards/ Certification
1	Ashutosh	1603240035	4*400 Mtr. Relay Boys	Autodesk ATC Fusion Conclave	23-01-2018 19-03-2018	Silver Medal
2	Akash Pal Singh	1603240011	Participation Certificate			
3	Aviral Signhal	1603240043	Participation Certificate			
4	Divyam	1603240051	Participation Certificate			
5	Abhijeet Srivastava	1603240002	Participation Certificate			
6	Mohammad Ameer	1603240083	Participation Certificate			
7	Shashwat	1603240147	Hyper Rides	Bajaj Auto Ltd.	30-09-2018	Participation Certificate
8	Ashutosh	1603240035	Relay Race	GLA, MATHURA	16-03-2018	Participation Certificate
9	Mohd Anas Ansari	1603240084	Robo Rally	Shiv Nadar University	2018	Participation Certificate
10	Rishabh Chandra	1603240124			2018	Participation Certificate
11	Shivansh Khurana	1603240150	Robo Soccer	Shiv Nadar University	2018	Participation Certificate
12	Vishal Kardam	1603240169			2018	Participation Certificate
13	Shikhar Verma	603240148			2018	Participation Certificate
14	Pratyaksh Yadav	1603240109	Robocon	MIT Pune	01-03-2018	Participation Certificate
15	Vasu Dev Saini	1603240163				Participation Certificate
16	Ayush Goel	1503240051				Participation Certificate
17	Pranav Upadhyay	1603240105				Participation Certificate
18	Satyam Upadhyay	1503221066				Participation Certificate
19	Rishab Chandra	1603240124				Participation Certificate
20	Yash Dixit	1603240174	Sand Rover	Shiv Nadar University, Greater Noida	2018	Participation Certificate
21	Yash Dixit	1603240174	Table Tennis	GLA, Mathura	March 2018	Participation Certificate
22	Rishab Chandra	1603240124	WRC Robowar	New Delhi	30-06-2018	Participation Certificate
23	Shivansh Khurana	1603240150				Participation Certificate
24	Sanyam	1603240137				Participation Certificate
25	Mohd Anas Ansari	1603240084				Participation Certificate
26	Prashant Singh	1603240107				Participation Certificate
27	Mohd Ameer	1603240083				Participation Certificate
28	Vishal Kardam	1603240169				Participation Certificate
29	Yash Dixit	1603240174	Youth boy	RKGIT, Ghaziabad	04-11-2018	Participation Certificate



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