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# CRESCENT

Department of  
**Mechanical**  
Engineering

Jan. 2020 to Dec. 2020  
Annual Newsletter

## Message from Director



Crescent is for growth and so is the research.

Our institute has always levied huge stress on all the aspects of research for the growth of its employees in all the domains of life. Excelling in the field of research is yet another persuasion which has brought the magnificent results in the field of research publications, patent filing & publishing and industrial consultancy for our conglomerate.

We have achieved a lot and a lot is yet in the air to blot. Undoubtedly, research related activities have been the building blocks of this achievement. I specially congratulate the Department of Mechanical Engineering for leading the edge in this avenue and setting benchmarks for all the departments.

*Wishing lot of inspiration and happiness for the readers.*

**Prof. Shailesh Tiwari**

## Message from HOD



“Education is the passport to the future, for tomorrow belongs to those who prepare for it today.” Malcolm X

CRESCENT broadcasts the information of ABES Engineering College and showcases the hidden talents of the students and staff. It encloses the activities such as FDP, conferences attended and paper published in International and National journals by faculty members and competitions won by the students and innovative projects carried out by them. I, take this opportunity to thank all the stakeholders for showing interest and continuous support. I extend my best wishes to all students in their chosen career path and I am sure the college will scale up to greater heights in the years to come and serve many more in the society.

**Prof. R.K. Shukla**

## Message from Editor



It is a moment of elation for us while we are presenting next issue of our college newsletter to our readers. Every next issue of our college newsletter to our readers. Every next issue speak volumes about commendable achievement of our CRESCENT family as well as new landmark setup by our college. We have put all efforts to provide a complete well-knit view of this year's journey depicted through the milestone achieved by different department. Through further issue of CRESCENT, we do expect that we will keep on updating our readers in the similar fashion your constructive suggestion are always solicited. We welcome your valuable

comments, which may be mailed at [manabendra.saha@abes.ac.in](mailto:manabendra.saha@abes.ac.in).

**Mr. Manabendra saha**  
Assistant Prof. (ME)



## 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 and to handle the 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 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 modeling 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.

## PROGRAMME SPECIFIC OUTCOMES (PSOs)

Mechanical Engineering Program at ABESEC will be able to:

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

**PSO2:** Prepare the students for building their career in different industries or pursue higher studies in mechanical engineering and make them able to handle interdisciplinary problems with values and professional ethics.



## Research Publication 2019-20

- ❖ Vimal Kumar Yadav, Dr. Pikeshe Bansal, Mr. Shivam Sharma, (2020), “A Review of Stealth Technology”, International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 4, e-ISSN: 2456 – 6470.
- ❖ Mr. Amit Singh, Pradeep Shukla, Pratyush Pathak, Prince Mishra, Sameer Yadav, (2020), “A Review on Analysis of Welding Parameters of Dissimilar Aluminum Welding using Tig Welding”, Aegaeum Journal, Volume: 02, Issue: 06, e-ISSN: 2582-5208.
- ❖ Vinay Teotia, Ayush Pathak, Mohnish Yadav, Shivam Sharma, Dr. Dharmendra Singh, (2020), “A Review on Devices and Technologies on Filtration of Air Pollution”, Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Shashwat Kulshreshtha, Shantanu Tiwari, Naman Varshney, Shikhar Verma, Mr. Mayank Kushwaha, (2020), “A Review: Design of Effective Braking and Efficient Transmission System”, International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 4, 2456 – 6470.
- ❖ Shareq Wajih, Purab Verma, Sahil Yadav, Neeraj, Vivek Chauhan, Mr. Vijay Kumar Gupta, (2020), “A Study of Waste Disposal using a Portable Single Chambered Incinerator”, Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Mr. Naveen Kumar, Syed Mohammad Shoaib, (2020), “An Intelligent Traffic Light System Based on Piezo-Electric Sensors”, International Journal of Recent Technology and Engineering (IJRTE), Volume-8 Issue-5, ISSN: 2277-3878.
- ❖ Saurabh Kumar, Sanjay Kumar Patel, Vivek Kumar, Mr. Anoop Pandey, (2020), “Application of Ultrasonic Process in Measuring Flow of Exhaust Gases in BS6 Engines State of Art Review”, International Journal of Creative Research Thoughts (IJCRT), Volume 8, Issue 6, 23202882.
- ❖ Dr. Manish Saraswat, Nathi Ram Chauhan, Mr. Vijay Kumar Sharma, Dr. Rajendra Kumar Shukla, Dr. Kamal Sharma, (2020), “Assessment of Biomass Potential in Engine Emission Reduction”, Journal of Scientific & Industrial Research, Volume 79(01), 0975-1084 (Online); 0022-4456 (Print) pp.77-80..
- ❖ Mr. Mayank Kushwaha, Ravi Dubey, Shubham Singh, (2020), “Automatically Controlled Pneumatic Vice”, Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Saurabh Kumar, Sanjay Kumar Patel, Vivek Kumar, Mr. Ashish Gupta, Mr. Anoop Pandey, (2020), “Automotive Transmissions for Adapting Digital Display Technology”, Journal of Emerging Technologies and Innovative Research, Volume 7, Issue 6, ISSN-2349-5162.
- ❖ Yash Dixit, Mr. Shivam Sharma, Dr. Pikeshe Bansal, (2020), “Basic Analysis of Continuous Variable Transmission”, International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 4, e-ISSN: 2456 – 6470.
- ❖ Mr. Neeraj Kumar Sharma, Mr. Animesh Kumar, Anmol Sharma, Bodh Prakash Singh, Chirag Tyagi, (2020), “CFD Analysis of Convergent-Divergent Nozzles”, Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Mr. Naveen Kumar, Tushar Sharma, Vikas Sharma, (2020), “CFD Analysis of Wheel Hub, Paddle Hub and Roll Cage in Solid Works”, International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 3, e-ISSN: 2456 – 6470.
- ❖ Dr. Manish Saraswat, Nathi Ram Chauhan, (2020), “Comparative Assessment of Butanol and Algae Oil as Alternate fuel for SI Engines”, Engineering Science and Technology, an International Journal, Volume 23 Issue 1, ISSN: 2215-0986, pp 92-100.
- ❖ Nikhil Kr. Gupta, Mukul Singh Solanki, Ravi Ruwali, Shyam Yadav, Mr. Shivam Sharma, (2020), “Design Analysis Automatic Garage Door Opener”, International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 4, e-ISSN: 2456 – 6470.
- ❖ Mr. Shivam Sharma, Navin Kumar, Manendra Pratap Kushwaha, Rajat Katiyar, Manas Singhal, (2020), “Design and Fabrication of Hydraulic Tube Bending Machine”, Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Mr. Chetan Rajoria, (2020), “Design and Fabrication of a Remote Controlled Whiteboard Cleaning Mechanism”, Aegaeum Journal, Volume 8, Issue 6, 2020, 0776-3808.
- ❖ Mr. Harvir Singh, Mr. Mayank Kushwaha, (2020), “Design and Optimization of an All-Terrain Vehicle Roll Cage”,





- ❖ Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Mr. Vijay Kumar Gupta, Puru Raj Verma, Prince Malik, Rajat Singh Chauhan, Veeresh Vishwakarma, (2020), "Design and Static Structural Analysis of Disc Brake Rotor", Aegaeum Journal, Volume 8, Issue 6, ISSN NO:0776-3808.
- ❖ Mr. Naveen Kumar, Tushar Anand Sharan, Tushar Rajput, (2020), "Design of Solar Car Chassis", International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 3, e-ISSN: 2456 – 6470.
- ❖ Yash Kumar, Saurabh Pati Tripathi, Himanshu Dixit, Piyush Tiwari, Navneet Pathak, Mr. Shailendra Pratap Singh, (2020), "Estimation and Parametric Analysis of Heat Transfer Coefficient for a Solar Still: A review", International Journal of Advance Research, Ideas and Innovations in Technology, Volume 6, Issue 1, ISSN: 2454-132X.
- ❖ Mr. Sanjay Kumar, Mr. Animesh Kumar, (2020), "Fabrication of Can-Crusher using Quick-Return Mechanism", Aegaeum Journal, Volume 8, Issue 6, ISSN NO:0776-3808.
- ❖ R. Khanna, Dr. Rahul Saini, M. Park, G. Ellamparuthy, S.K. Biswal, P.S. Mukherjee, (2020), "Factors Influencing the Release of Potentially Toxic Elements (PTEs) During Thermal Processing of Electronic Waste", Waste Management Science Direct Elsevier Ltd., Vol. 105, PP 414-424.
- ❖ Mohan Gupta, Kamal Sharma, Dr. Manish Saraswat, (2020), "Heat Transfer and Pressure Drop Investigation in a Circular Tube by the use of Various Kinds of Inserts", Journal of Scientific & Industrial Research, Vol. 79(2), 0975-1084 (Online); 0022-4456 (Print) pp.160–163.
- ❖ Mr. Manoj Kumar, Dharni Dhar Yadav, Durgesh Yadav, Mashaba Singh, (2020), "Infrared Plastic Solar Cell Review", Aegaeum Journal, Volume 8, Issue 7, ISSN NO:0776-3808.
- ❖ Suraj Pandey, Rachit Saxena, Dr. Pikeshe Bansal, Mr. Shivam Sharma, (2020), "Investigating the Designs of Wind Turbine Blades", International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 4, e-ISSN: 2456 – 6470.
- ❖ Dr. Ravi Shankar Raman, Sandeep Pratap Singh, Tarun Sharma, Sudhir Kumar, (2020), "Machining Parameters Optimization for the Surface Roughness through Taguchi Analysis", Journal of Engineering, Computing and Architecture, Volume 10, Issue 5, ISSN NO:1934-7197.
- ❖ Mr. Manoj Kumar, (2020), "Management of Indian Railways Supply Chain Management", Aegaeum Journal, Volume 8, Issue 7, ISSN NO:0776-3808.
- ❖ Prasad Eknath Lokhande, Umesh S. Chavan, Mr. Abhishek Pandey, (2020), "Materials and Fabrication Methods for Electrochemical Supercapacitors: Overview", Electrochemical Energy Reviews, Volume 3, Electronic ISSN 2520-8136 Print ISSN 2520-8489.
- ❖ Mr. Animesh Kumar, Mr. Neeraj Kumar Sharma, Mr. Sanjay Kumar, (2020), "Mechanical Assessment of Composite Material (Al-6061) Reinforced with Marble Dust", Aegaeum Journal, Volume 8, Issue 6, ISSN NO: 0776-3808.
- ❖ Mr. Naveen Kumar, Shivendra Singh, Kumar Adhish, Gaurav Singh, Mayank Yadav, Sachin Kishore, (2020), "Oil Spill and Methods to Recover: A Review", International Journal of Trend in Scientific Research and Development (IJTSRD), Volume 4 Issue 4, e-ISSN: 2456 – 6470.
- ❖ Rashmi Jain, Dr. Anuj Kumar Jain, (2020), "On Cliques and Clique Chromatic Numbers in Line, Lict and Lictact Graphs", Springer Proceedings in Mathematics & Statistics, Volume 307, Print ISBN 978-981-15-1156-1 Online ISBN 978-981-15-1157-8.
- ❖ Mr. Manoj Kumar, (2020), "Optimization of Machining Parameters of Aluminum Alloy using Taguchi Approach", SSRN-Elsevier, 3554237WPS.
- ❖ Dr. Ravi Shankar Raman, Sandeep Pratap Singh, Tarun Sharma, Sudhir Kumar, (2020), "Optimization of Process using Robust Design (Taguchi Method): An Review", Journal Of Engineering, Computing and Architecture, Volume 10, Issue 5, ISSN NO:1934-7197.
- ❖ Mr. Parag Singh, (2020), "Performance Improvement in Air Conditioning by using Heat Pipe", Aegaeum Journal, Volume 8, Issue 6, ISSN NO:0776-3808.
- ❖ Priyank Srivastava, Arsalan Mustafa, Dinesh Khanduja, Sunil Kumar Chowdhary, Naveen Kumar, Kartik, Dr. Rajendra Kumar Shukla, (2020), "Prioritizing Autonomous Maintenance System Attributes using Fuzzy EDAS Approach", Published by Elsevier B.V.,



- ❖ Volume 167, 1941–1949.
- ❖ Saurabh Kumar, Sanjay Kumar Patel, Vivek Kumar, Ashish Gupta, Mr. Anoop Pandey, (2020), “Review of Automotive Transmissions for Adapting Digital Display Technology”, Journal of Microwave Engineering & Technologies, Volume 6, Issue 2, 2455-0337.
- ❖ Mr. Naveen Kumar, Suraj Vishwakarma, (2020), “Roll Cage and Material Selection”, International Journal of Engineering Research & Technology, Volume 9 Issue 03, ISSN: 2278-0181.
- ❖ Mr. Rahul Verma, Saurabh Rai, Pratyksh Yadav, Rohit Yadav, (2020), “Safer Alternatives to Asbestos in Asbestos-Free Brake Pad Manufacturing: A Review”, International Research Journal of Engineering and Technology (IRJET), Volume: 07 Issue: 07, e-ISSN: 2395-0056 p-ISSN: 2395-0072.
- ❖ Harivans Pratap Singh, Priti Dimri, Dr. Shailesh Tiwari, Dr. Manish Saraswat, (2020), “Segmentation Techniques through Machine Based Learning for Latent Fingerprint Indexing and Identification”, Journal of Scientific & Industrial Research, Volume 79 (03), 0975-1084 (Online); 0022-4456 (Print) pp. 201-208.
- ❖ Mr. Naveen Kumar, Vaibhav Chittoria, Utkarsh Upadhyay, (2020), “Spur Gear Designing and Weight Optimization”, International Journal of Engineering Research & Technology, Volume 9 Issue 03, ISSN: 2278-0181.
- ❖ Vaibhav Kumar Bhaskar, Mr. Shivam Sharma, (2020), “Stress Analysis of High Speed Turbo-Machinery”, Journal Of Engineering, Computing and Architecture, Volume 10, Issue 7, ISSN NO: 1934-7197.
- ❖ Mr. Anoop Pandey, Harsh Vishwakarma, (2020), “Using QC Tools to Investigate the Problem of Rejection of Piston Rings - A Case Study of Engine Component Manufacturing Organization”, International Journal of Scientific & Technology Research, Volume 9, Issue 04, ISSN 2277-8616.

### FDP Organized

- ❖ One Week AICTE recognized Faculty Development Program on “IoT in Manufacturing” through ICT was organized from 6th Jan. to 10th Jan 2020 & NITTTR Kolkata sponsored it. Mr. Manabendra Saha coordinated FDP.
- ❖ One Week Faculty Development Program on “AUTOCAD” was organized from 13 Jan to 17 Jan 2020 & it was sponsored by ICT Academy. FDP was coordinated by Mr. Pradeep Sharma.

### NPTEL CERTIFICATES

S.No.	Faculty Name	COURSE Name	Duration	Certificate Type
1	Mr. Ankur Dixit	Python for Data Science	Jan-Feb 2020	Passed
2	Mr. Ankur Dixit	IC Engines and Gas Turbines	Jan-Apr 2020	Passed
3	Mr. Ankur Dixit	Fundamentals of Automotive Systems	Jan-Apr 2020	Passed
4	Mr. Shailendra Pratap Singh	Steam and Gas Power Systems	Feb-Apr 2020	Passed
5	Mr. Shailendra Pratap Singh	IC Engines and Gas Turbines	Jan-Apr 2020	Passed
6	Mr. Shailendra Pratap Singh	Computational Fluid Dynamics for Incompressible Flows	Jan-Apr 2020	Passed Elite
7	Mr. Mohit Bansal	Computational Fluid Dynamics for Incompressible Flows	Jan-Apr 2020	Passed
8	Mr. Mohit Bansal	IC Engines and Gas Turbines	Jan-Apr 2020	Passed
9	Mr. Naveen Kumar	Manufacturing Process Technology I & II	Jan-Apr 2020	Passed
10	Mr. Anoop Pandey	Six Sigma	Jan-Apr 2020	Passed
11	Dr. Anuj Kumar Jain	Financial Mathematics	Jan-Apr 2020	Passed
12	Mr. Shivam Sharma	NBA Accreditation and Teaching - Learning in Engineering	Jan-Apr 2020	Passed
13	Mr. Navendra Pratap Singh	Online Workshop on Transition to Online Facilitation	May-June 2020	Passed



## Patents

S. No.	Applicant name	Application No.	Date of filing	Inventors Name	Product Name	Status
1	Chitkara Innovation Incubator Foundation	202011028228	01.08.2020	1. Mr. Atul Garg 2. Kamali Gupta 3. Mr. Mohit Bansal 4. Nidhi Bansal	Pollution Monitoring Device for Vehicle	Filed
2	ABESEC Ghaziabad	329123-001	30.04.2020	1. Mohit Bansal 2. Pradeep Maurya 3. Dr. Rahul Saini 4. Dr. Atul Garg 5. Shailendra Pratap Singh	DOOR OPENING HARNESS	Filed
3	ABESEC Ghaziabad	326821-001	02.05.2020	1. Dr. Rahul Saini 2. Dinesh Patharia 3. Gopal Kumar 4. Harsh Aggarwal 5. Harshwardhan Singh 6. Ikrama Shahid 7. Indra Kumar Chaurasia 8. Saurabh Kumar	Hybrid Refrigerated Air Cooler Cum Air Purifier System	First Examination Done
4	ABESEC Ghaziabad	325339-001	01.02.2020	1. Ravi Shankar Raman 2. Dinesh Pathariya 3. Girish Pandey	WASTE PAPER & PLASTIC SHREDDER DUSTBIN	Filed
5	ABESEC Ghaziabad	202011046630	13.11.2020	1. Ms. Anurupa Goswami 2. Mr. Pradeep Sharma, 3. Dr. Pikeshe Bansal 4. Dr. Rajendra Kumar Shukla 5. Dr. Sanjay Kumar Singh	SMART INTELLIGENT STRETCHER SYSTEM UNDER COMMUNICATION FIELD OF INVENTION	Published

## Competitive projects

### SAE BAJA: AIR 18 (Mechanical Design Evaluation)

13th edition of BAJA event was organized by the Society of Automotive Engineers India and Mahindra and Mahindra at NATRiP, Pithampur, Indore from Jan 22 to Jan 29, 2020. A total of 282 teams had registered in this edition of BAJA SAE India series, out of which 172 (119- mBAJA and 53 eBAJA for Pithampur) and 110- mBAJA for Chitkara University Punjab qualified for the finale, while 97 teams (77 teams for mBAJA and 20 for eBAJA) made it to the Endurance round. This year more than 4,200 students participated from different parts of the country celebrating the BAJA SAE India 2020 theme 'BREAKING CONVENTIONS'. Renowned institutions like IIT HYDERABAD, NIT Jamshedpur, COE Pune, IIT Kanpur and others had sent their institutes' teams to the event. ABES EC secured AIR 18 in Mechanical Design Evaluation and AIR 66 in overall rounds. Total 24 students from mechanical engineering were involved and participated in this event. Mr. Rahul Khanna, Mr. Md. Asif and Mr. Rakesh Gupta were faculty advisor & mentor for this event.



BAJA SAE India 2020, Pithampur (M.P)





## Faculty Outreach

- ❖ **Dr. Manish Saraswat** delivered a webinar lecture on “Challenges in Utilization of Hydrogen Energy” on 18th May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering. This webinar series was for faculty and students.
- ❖ **Mr. Shailendra Pratap Singh** delivered a webinar for the Diploma students on the topic “What Next after Diploma” on 19th May 2020.
- ❖ **Mr. Rahul Verma** delivered a webinar lecture on “COVID-19: An Overview of India & World” on 19th May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.
- ❖ **Mr. Neeraj Kumar Sharma** delivered a webinar lecture on “Combustion in SI Engines” on 20th May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.
- ❖ **Dr. Ravi Shankar Raman** delivered a webinar lecture on “Quality Improvement through 6 Sigma Methodology” on 20th May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.
- ❖ **Mr. Shivam Sharma** delivered a webinar lecture on “Digital Manufacturing – Introduction to CNC Machining” on 21st May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.
- ❖ **Mr. Mohit Bansal** delivered a webinar lecture on “Dynamics of Viscous Flows: Navier Stokes Equation and its Simplified forms” on 22nd May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.
- ❖ **Mr. Pradeep Sharma** delivered a webinar lecture on “AutoCAD – Applications” on 23rd May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.
- ❖ **Mr. Rahul Verma** delivered a webinar lecture on “Coronavirus (COVID-19) Pandemic: A Brief Overview of India & World” on 19th May 2020

under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.

- ❖ **Mr. Anoop Pandey** delivered a webinar lecture on “Basics of Measuring Instruments” on 24th May 2020 under the webinar series- Current Scenario and Future Challenges in Mechanical Engineering.

## Staff Development Program

- ❖ **Mr. Vinod Sharma and Mr. Rajesh Kumar Sharma** had attended online FDP on “Welding Laboratory Practices” from 18-22 Nov. 2019 organized by NITTTR Chandigarh.
- ❖ **Mr. Dinesh Patharia** has attended online FDP on “Mechanical Manufacturing and Process Optimization” from 25-29 June.2020.
- ❖ Lab Assistants took several courses and earned completion certificates on Coursera. Few lab assistants had completed multiple courses and total 34 certificates were earned in different subject domains during Jan-July 2020.
- ❖ **Mr. Vineet Sinha**, passed SWAYAM, NPTEL MOOC course on “IC Engine and Gas Turbine” during Jan-Apr 2020.

## Skill Enhancement Program

### Summer Training & Industrial Skill Building

- ❖ An online summer training course-cum-internship was organized on “Data Analysis using Python” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory completion of the course. Mr. Rahul Verma. Total 39 students were enrolled for this training course-cum-internship conducted this training. Total 31 students earned Coursera certificate in the similar course on Coursera platform to fulfill one of the criteria of the outcome of this course.
- ❖ An online summer training course-cum-internship was organized on “AutoCAD” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory two faculty members, Mr. Abhishek Pandey & Mr. Pradeep Sharma, conducted completion of the course. This





- ❖ training. Total 35 students were enrolled for this training course-cum-internship. Total 22 students earned certificate in the similar course on Coursera platform to fulfill one of the criteria of the outcome of this course.
- ❖ An online summer training course-cum-internship was organized on “SolidWorks” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory two-faculty members conducted completion of the course. This training, Dr. Ravi Shankar Raman & Mr. Harvir Singh. Total 40 students were enrolled for this training course-cum-internship.
- ❖ An online summer training course-cum-internship was organized on “CNC Lathe Training” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory completion of the course. Two faculty members, Mr. Shivam Sharma, conducted this training & Mr. Arun Pratap Singh. Total 138 students were enrolled for this training course-cum-internship. Total 129 students earned certificate in the similar course on Coursera platform to fulfill one of the criteria of the outcome of this course.
- ❖ An online summer training course-cum-internship was organized on “Computational Fluid Dynamics” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory completion of the course. Three faculty members, Mr. Manish Mangal, Mr. Mohit Bansal & Mr. Shailendra Pratap Singh. Total 39 students were enrolled for this training course-cum-internship, conducted this training.
- ❖ An online summer training course-cum-internship was organized on “Ansys” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory completion of the course. This training was conducted by three faculty members, Dr. Dharmendra Singh, Mr. Saurabh & Mr. Mayank Kushwaha. Total 22 students were enrolled for this training course-cum-internship.
- ❖ An online summer training course-cum-internship was organized on “Solving Mechanical Engineering Problems using Python” for the students during May to June 2020. Certificates were awarded to the students upon satisfactory completion of the course. This training was conducted by three faculty members, Mr. Rahul Verma, Mr. Mohit Bansal & Mr. Shailendra Pratap Singh. Total 94 students were enrolled for this training course-cum-internship. Total 86 students earned Coursera certificate in the similar course on Coursera platform to fulfill one of the criteria of the outcome of this course.
- ❖ Mr. Anoop Pandey and team delivered training under the Industrial Skill Building Program phase 2 to students in different domains (HVAC, Automotive Technology, Wire Harnessing, Emission System, Steering System, Line Balancing and Chassis). Total 56 students successfully completed this skill building program in phase 2.

### **Learning beyond the Curriculum: MOOCs Certifications**

- ❖ Students from all years took several courses and earned completion certificates on Coursera. Few students completed multiple courses and total 1041 certificates were earned in different subject domains during Jan-July 2020.
- ❖ Students from all years took several courses and earned completion certificates on SWAYAM-NPTEL. Few students completed multiple courses and total 80 certificates were earned in different subject domains during Jan-July 2020.

### **Online webinar activity**

Dr. Ashish Rajak, Assistant Professor, IITDM Jabalpur delivered a talk on the topic of “Advance Welding Technology” on 25th June 2020.



## Student Publication

### Research Publication 2019-20

S. No.	Name	Roll No.	Title	Name of Conference/Journal	Issue and Volume
1	Syed Fozail Ahmad	1703240141	A Comparative Overview on the Horizontal Axis and the Vertical Axis wind Turbines	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume 4   Issue1
2	Vimal Kumar Yadav	1603240166	A Review of Stealth Technology	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
3	Pradeep Shukla	1603240103	A Review on Analysis of Welding Parameters of Dissimilar Aluminum Welding Using Tig Welding	International Research Journal of Modernization in Engineering Technology and Science	Volume02   Issue06
	Pratyush Pathak	1603240110			
	Prince Mishra	1603240111			
	Sameer Yadav	1603240134			
4	Vinay Teotia	1603240167	A Review on Devices and Technologies on Filtration of Air Pollution	Aegaeum Journal	Volume 8   Issue 6
	Ayush Pathak	1603240045			
	Mohnish Yadav	1603240088			
5	Alok Kumar Gupta	1703240902	A Review Paper on Design of Generator in Vapour Absorption Refrigeration System	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
	Laraib Ahamad	1703240904			
	Prabhat Kumar Yadav	1603240102			
	Paurush Pandit	1603240100			
6	Udit Singhal	1703240149	A Review Paper on Fin Efficiency Enhancement	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue1
7	Shareq Wajih	1603240145	A Study of Waste Disposal Using a Portable Single Chambered Incinerator	Aegaeum Journal	Volume 8   Issue 6
	Purab Verma	1603240114			
	Sahil Yadav	1603240133			
	Neeraj	1603240094			
	Vivek Chauhan	1603240170			
8	Syad Md. Shoheb	1703240142	An Intelligent Traffic Light System Based on Piezo- Electric Sensors	International Journal of Recent Technology and Engineering (IJRTE)	Volume8   Issue-5
9	Saurabh Kumar	1603240139	Application of Ultrasonic Process In Measuring Flow of Exhaust Gas In Bs6 Engines-State Of Art Review	International Journal of Creative Research Thoughts (ICRT)	Volume 8   Issue 6
	Sanjay Kumar Patel	1603240136			
	Vivek Kumar	1603240171			
10	Ravi Dubey	1303240079	Automatically Controlled Pneumatic Vice	Aegaeum Journal	Volume 8   Issue 6
	Shubham Singh	1803240150			
11	Saurabh Kumar	1603240139	Automotive Transmissions for Adapting Digital Display Technology	Journal of Emerging Technologies and Innovative Research (JETIR)	Volume 7   Issue 6
	Sanjay Kumar Patel	1603240136			
	Vivek Kumar	1603240171			
	Ashish Gupta	1703240039			
12	Yash Dixit	1603240174	Basic Analysis of Continuous Variable Transmission	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
13	Tushar Sharma	1603240161	CFD Analysis of Wheel Hub, Paddle Hub and Roll Cage in Solid Works	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue3
	Vikas Sharma	1603210238			



14	Nikhil Kr. Gupta	1603240097	Design Analysis Automatic Garage Door Opener	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
	Mukul Singh Solanki	1603240090			
	Ravi Ruwali	1603240121			
	Shyam Yadav	1603240155			
15	Sachin Kumar Sharma	1603240132	Design and Analysis of Universal Reaper Machine	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
	Gautam Kumar	1603240058			
	Prashant	1603240106			
	Vivek Tyagi	1603240172			
	Vineet Pal	1603240168			
	Saurabh	1603240141			
16	Puru Raj Verma	1303240071	Design and Static Structural Analysis of Disc Brake Rotor	Aegaeum Journal	Volume 8   Issue 6
	Prince Malik	1303240068			
	Rajat Singh Chauhan	1303240076			
	Veeresh Vishwakarma	1303240116			
17	Tushar Anand Sharan	1703240144	Design of Solar Car Chassis	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue3
	Tushar Rajput	1703240145			
18	Suraj Pandey	1603240157	Investigating the Designs of Wind Turbine Blades	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
	Rachit Saxena	1603240116			
19	Sandeep Pratap Singh	1603240135	Machining Parameters Optimization for the Surface Roughness through Taguchi Analysis	Journal of Engineering, Computing and Architecture	Volume 10   Issue5
	Tarun Sharma	703240908			
	Sudhir Kumar	1703240907			
20	Shivendra Singh	1603240151	Oil Spill and Methods to Recover: A Review	International Journal of Trend in Scientific Research and Development (IJTSRD)	Volume4   Issue4
	Kumar Adhish	1603240073			
	Gaurav Singh	1603240055			
	Mayank Yadav	1603240081			
	Sachin Kishore	1603240131			
21	Sandeep Pratap Singh	1703240908	Optimization of Process using Robust Design (Taguchi Method): A Review	Journal of Engineering, Computing and Architecture	Volume 10   Issue 5
	Tarun Sharma	1703240908			
	Sudhir Kumar	1703240907			
22	Suraj Vishwakarma	1703240139	Roll Cage and Material Selection	International Journal of Engineering Research & Technology (IJERT)	Volume 09   Issue 03
23	Saurabh Rai	1603240141	Safer Alternatives to Asbestos in Asbestos free brake pad manufacturing: A Review	International Research Journal of Engineering & Technology (IJERT)	Volume07   Issue07
	Pratyksh Yadav	1603240109			
	Rohit Yadav	1603240130			
24	Vaibhav Chittoria	1703240151	Spur Gear Designing and Weight Optimization	International Journal of Engineering Research & Technology (IJERT)	Volume 09   Issue 03
	Utkarsh Upadhyay	1703240150			
25	Vaibhav Kumar Bhaskar	1803240169	Stress Analysis of High Speed Turbo-Machinery	Aegaeum Journal	Volume 10   Issue 7
26	HrashVishwakarma	1603240060	Using QC Tools to Investigate the Problem of Rejection of Piston Rings - A Case Study of Engine Component Manufacturing Organization	International Journal of Scientific & Technology Research	Volume 9   Issue 04





### Patents Filed By Students

S.No.	Applicant Name	Application No.	Date of filing	Inventors Name	Product Name	Status
1	ABESEC Ghaziabad	326821-001	02.05.2020	1. Gopal Kumar 2. Harsh Aggarwal 3. Harshwardhan 4. Ikrama Shahid 5. Indra Chaurasia 6. Saurabh Kumar	Hybrid Refrigerated Air Cooler Cum Air Purifier System	First Examination Done
2	ABESEC Ghaziabad	325339-001	01.02.2020	1. Girish Pandey	WASTE PAPER & PLASTIC SHREDDER DUSTBIN	Filed

### Achievements -National/International Level

S. No.	Participant Name	Roll No.	Title of event	Participated at	Date format same	Awards/ Certification
1	Ashutosh Kumar	1603240035	Relay Race	ABESIT, Ghaziabad	24-01-2020	Participation Certificate
2	Varun Kumar	1703240153	400 Mtr. Boys	HBTU, Kanpur	15-02-2020	Gold medal
3	Varun Kumar	1703240153	4*400 Mtr. Relay Boys	HBTU, Kanpur	15-02-2020	Gold medal
4	Shubham	1703240132				

### National Level Exam: GATE-2020 Success

Total 5 students (based on the scorecards shared by students) have qualified GATE-2020 exam.

The best rank among the available results was AIR-5623.

S.NO	Roll No.	B.Tech Passed in Session	NAME
1	1603240094	2019-20	Neeraj
2	1603240127	2019-20	Ritik Verma
3	1603240098	2019-20	Nikhil Mishra
4	1603240106	2019-20	Prashant
5	1603240112	2019-20	Priyank Srivastava

### Student chapter / Professional Society Activity

S. No.	Name of the event	Society Name	Date of Event
1	Brazing Technology	IIW	19/06/2020
2	Preparation of inspection and test plan	IIW	03/10/2020
3	Motivational & Introductory Talk	ISHRAE	18/10/2019
4	Scope of Automotive Sector and Technologies Reforms in coming 5 years	SAE	04/07/2020

### Our Patrons

#### Chief Patron

Sh. Neeraj Goel  
Chairman

#### Patrons

Sh. Sachin Kumar Goel  
Vice Chairman

Prof. Shailesh Tiwari  
Director

#### Chairman, Publication

Prof. (Dr.) R.K. Shukla  
Head, ME Dept.

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