DEPARTMENT OF MECHANICAL ENGINEERING

MECHANIX G WORLD

TECHNICAL MAGZINE

EDITION-1

AUG-2020-21

GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, KABLANA

GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

DEPARTMENT OF MECHANICAL ENGINEERING

CONTENT

Director's Message

DR. AMAN AGGARWAL

GITAM, KABLANA

Welcome to the latest edition of our "Mechanix G World" Magazine! We invite you to explore the forefront of mechanical engineering excellence. I am immensely proud of the passion and dedication demonstrated by our community. I encourage you to immerse yourselves in this enriching knowledge, insights, and inspiration collection. This magazine celebrates the relentless pursuit of knowledge, creativity, and problem-solving that define our field. Your passion and dedication make our department a centre of excellence. We hope this edition sparks your curiosity and fuels your drive to create a better, more innovative world.

HOD's Message

MR. VIVEK

GITAM, KABLANA

"I am thrilled to announce the release of our Departmental Newsletter, "MECH G CONNECT." This publication showcase our achievements and student accomplishments. I extend my gratitude to the Newsletter Committee for their hard work and contributors for enriching the content. The newsletter will be a continuous project, welcoming your future contributions. Congratulations to all for making this newsletter a reality!"

VISION MISSION OF INSTITUTE

VISION

GITAM aims to be an outstanding Institue in India through academic excellence in the field of Technology and Management to fulfill the need of the Industry and serve the society.

MISSION

- To Provide healthy environment to our students as well as faculty members.
- To achieve excellence in technical education
- To promote holistic development of students through interaction with alumni, academia, Industry and expert lectures.
- To attract nurture and retain the best faculty and technical manpower.
- To promote research and development Initiatives.
- To contribute to the society by inculcating professional ethics in the students.

VISION MISSION OF DEPARTMENT OF MECHANICAL ENGINEERING

VISION

"To become a center of excellence in the field of Mechanical Engineering, committed to address societal challenges and evolving needs of industry."

MISSION

- To achieve excellence in mechanical engineering by providing outcome-based education an a healthy learning environment.
- To enhance the student's technical and entrepreneurial skills by providing advanced learning facilities and co-curricular activities.
- To inculcate professional ethics, leadership qualities, and moral and social values among students through interaction with alumni and experts from industry and academia.
- To encourage students to research and innovate through project works, workshops, conferences, training sessions, etc.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

- **PO-1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **PO-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.
- **PO-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.
- **PO-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.
- **PO-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 limitation.
- **PO-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.
- **PO-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.
- **PO-8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO-9 Individual and Teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

- **PO-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.
- **PO-11 Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply the set to one's own work, as a member and leader in a team, to manage projects and in multi-disciplinary 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.

PEO (PROGRAMME EDUCATIONAL OUTCOMES

The students will be able to:

- **PEO-1** To produce competent Mechanical Engineers, capable of applying the knowledge of contemporary Science and Technology, to meet the challenges in Mechanical and allied Engineering fields.
- **PEO-2** To prepare the Mechanical Engineering graduates to work in diverse fields in different capacities involving individual and teamwork.
- **PEO-3** To inculcate among the students a sense of ethics, morality, creativity, leadership, teamwork, and professionalism.
- **PEO-4** To instill in the students, the ability to take up innovative research projects and to conduct investigations of complex Mechanical Engineering problems using research-based methods.

PSO (PROGRAMME SPECIFIC OUTCOMES

The students will be able to:

- **PSO-1** Solve the real life problems by integrating design, thermal and manufacturing areas of Mechanical Engineering.
- **PSO-2** Adapt to rapid changes in the field of Mechanical Engineering and excel in a multidisciplinary work environment.

ABOUT MECHANICAL ENGINEERING

The Department of Mechanical Engineering was established in 2010 with the aim to provide the best knowledge and environment to ensure complete success in whatever field the students choose. This Department is one of the key strength of the Institute. It is making very sincere efforts to produce excellent Mechanical Engineering graduates to meet the present day needs of organizations and the Industry. The experienced and dedicated faculties along with its excellent facilities provide the necessary resources to keep the students updated with the latest industrial trends. The department has created state-of–the-art infrastructure in terms of Workshops, Laboratories and other facilities.

PROGRAMME	DURATION	INTAKE
B.TECH MECHANICAL ENGINEERING	4 YEARS	90
B.TECH MECHANICAL ENGINEERING (LEET)	3 YEARS	09
M.TECH MACHINE DESIGN	2 YEARS	12
M.TECH MANUFACTURING AND AUTOMATION	2 YEARS	18

Why GITAM?	Why ME?	Aspirants often Made Mistakes While Choosing Engineering Branch
Best Academics and Results	Problem-solving opportunities in various industries.	Advised by Parents
State-of-the-art Laboratories	Versatility with a wide range of applications and specializations.	Advised by Relatives
Experienced and dedicated Faculty	Global demand, providing job stability and growth opportunities.	Advised by Friends
Best Placement	Collaboration with diverse engineering disciplines in interdisciplinary teams.	Do not see the Market Scenario after 3-4 Years
Best Infrastructure	Continuous learning and adaptation to new technologies.	Do not See Future Prospects of the Branches

JOB OPPORTUNITY

PUBLIC SECTOR

PSU: DMRC, BEL, ISRO, ONGC, DRDO, ECIL,BHEL,BARC, NTPC, HPCL, NHPC,POWER GRID, CIL, IOCL, NALCO, VIZAG STEEL SJVNL, IFFCO, AAI, GAIL, SAIL, HAL, BPCL, Railways and many more.....
Defence-Sector: ARMY. NAVY, AIR-FORCE and Paramilitary Forces.

PRIVATE SECTOR

Tata Motors, Larsen & Toubro (L&T), Mahindra & Mahindra, Reliance Industries, Bajaj Auto, Hero MotoCorp, Maruti Suzuki, Godrej & Boyce, Ashok Leyland, Thermax, Suzlon Energy, TATA Power, Escorts Limited, TVS Motor Company

SPECIALISATIONS

» Aeronautical Engineer: Performs and supervises the design, development, manufacture and maintenance work of all types of flight vehicles.
» Automotive Engineer: design, manufacture and operate ground-based vehicles, such as motorcycles, automobiles, buses and trucks and their respective engineering subsystems.
» Consultant Engineer: undertake independent contract work for clients in a particular field. Consulting Engineers generally work on a project-by-project basis for a variety of clients.
» Engineering Project Manager: plan, administer and review engineering and technical projects.
» Manufacturing Systems Engineer: design and improve systems and equipment that complete tasks accurately and change raw materials into products with minimal time, materials and energy waste.
» Mechanical Design Engineer: design new machines, equipment or systems taking into account cost, availability of materials, strength and maintenance requirements.
» Mining Engineer: plan and direct the engineering aspects of extracting mineral resources from the earth.

ENTREPRENEUR

Nuts and Bolts Manufacturing, Solar Panel Installation, Product Assembly Service, Mechanical Engineering Consultancy Firm, Supply Chain Management, Chemical Industry Machines Designing, CNC Machining Business, E-waste Recycling, Machinery Designing, Machinery Distribution, Water disposal machine, Aluminium doors and windows manufacturing unit, Scrap metal business, Manufacturing household gadgets, Mechanical industry machines, Manufacturing of defence weapons, CCTV manufacturing, Mining equipment lease, Generator maintenance services, Fitness equipment manufacturing, Metal sign boards, Outdoor bicycle rack, Teach CAD/CAM/CAE, Repair of automobiles, Manufacturing 3D printers, Training school, Customization of automobiles

FACULTY EDITOR'S

MR. BHOOP SINGH

STUDENTS EDITOR'S

VIVEK BHARDWAJ	18LME073	2020-21
VICKY KUMAR	19LME066	2020-21
PRASHANT TRIPATHI	19LME053	2020-21

POETRY

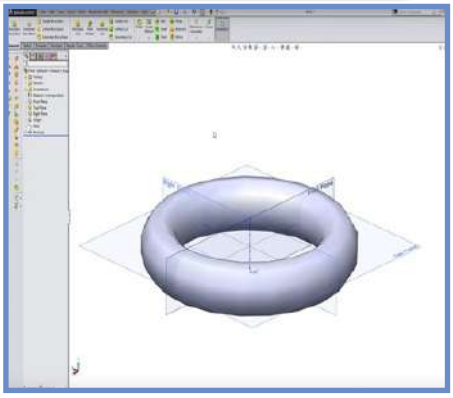
"In the realm of gears and steel, a world unfolds, where dreams are forged, and innovation beholds. Mechanical engineering, a dance of art and science, Crafting wonders through diligent defiance.

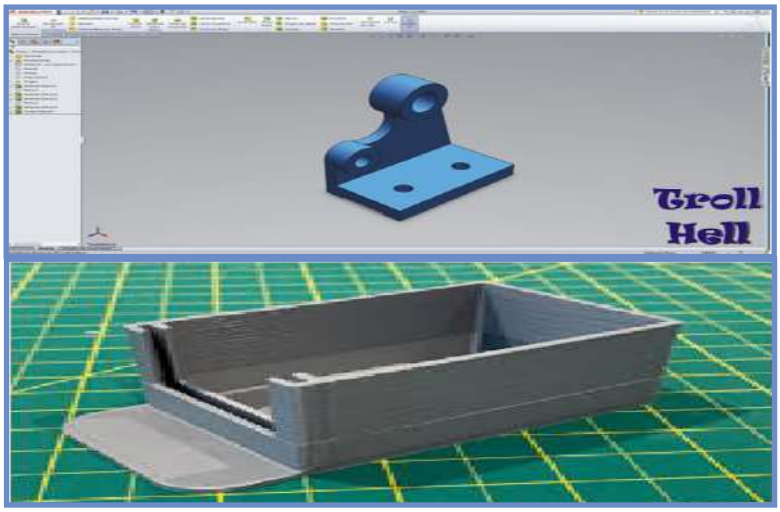
From the earliest civilizations, where wheels turned, Mechanical principles emerged, and knowledge churned. From ancient machines to the Renaissance's grace, The foundations laid, in every time and place."

INTRODUCTION TO SOLID WORKS

MR. BALRAJ HOODA
AP (ME)

Solid Works usually starts with a 2D sketch (although 3D sketches are available for power users). The sketch consists of geometry such as points, lines, arcs, conics (except the hyperbola), and splines. Dimensions are added to the sketch to define the size and location of the geometry. Relations are used to define attributes such as tangency, parallelism, perpendicularity, and concentricity. The parametric nature of Solid Works means that the dimensions and relations drive the geometry, not the other way around. The dimensions in the sketch can be controlled independently, or by relationships to other parameters inside or outside the sketch.

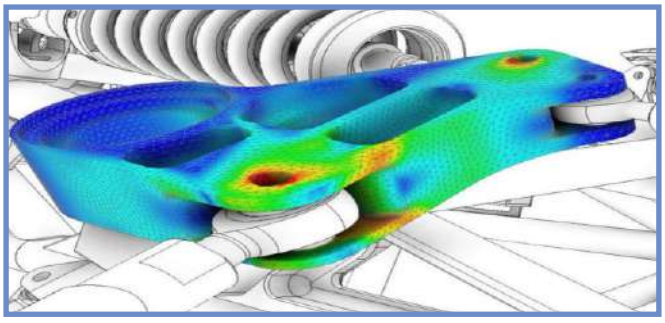




In an assembly, the analog to sketch relations are mates. Just as sketch relations define conditions such as tangency, parallelism, and concentricity with respect to sketch geometry, assembly mates define equivalent relations with respect to the individual parts or components, allowing the easy construction of assemblies. Solid Works also includes additional advanced mating features such as gear and cam follower mates, which allow modeled gear assemblies to accurately reproduce the rotational movement of an actual gear train.

INTRODUCTION TO FINITE ELEMENT ANALYSIS

MR. PARVESH
AP (ME)

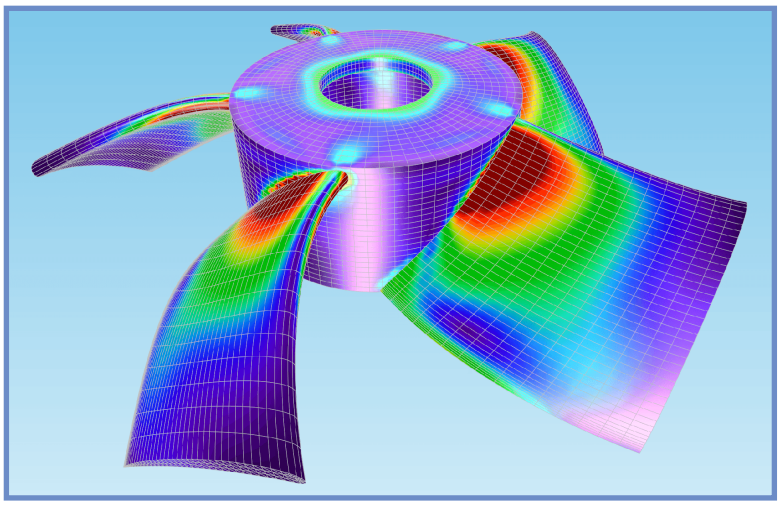


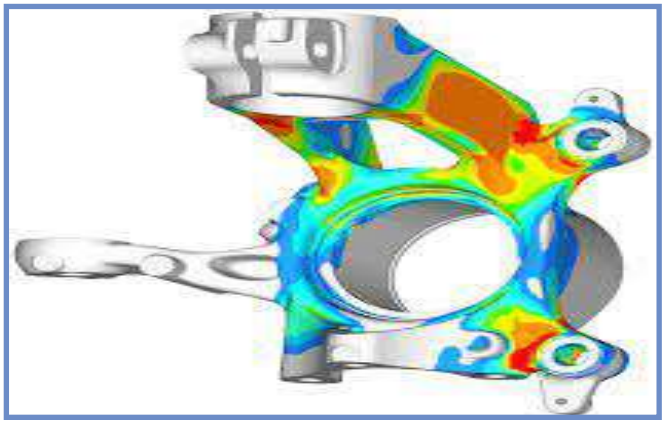
The Finite Element Analysis (FEA) is a numerical method for solving problems of engineering and mathematical physics.Useful for problems with complicated geometries, loadings, and material properties where analytical solutions can not be obtained.

The Purpose of FEA

Analytical Solution

- **Stress analysis for trusses, beams, and other simple structures are carried out based on dramatic simplification and idealization:**
  - **mass concentrated at the center of gravity**
  - **beam simplified as a line segment (same cross-section)**
- **Design is based on the calculation results of the idealized structure & a large safety factor (1.5-3) given by experience.**





FEA

Design geometry is a lot more complex; and the accuracy requirement is a lot higher. We need
– To understand the physical behaviors of a complex object (strength, heat transfer capability, fluid flow, etc.)
– To predict the performance and behavior of the design;
to calculate the safety margin; and to identify the weakness of the design accurately; and
– To identify the optimal design with confidence

"Next-Generation Materials: Innovations Reshaping Mechanical Engineering"

MR. BHOOP SINGH
AP (ME)

Materials science is at the forefront of reshaping the landscape of mechanical engineering, ushering in a new era marked by unprecedented innovation. This article delves into the transformative impact of next-generation materials on mechanical engineering, unraveling the intricate web of advancements that are propelling the field into uncharted territories.
Smart materials take the spotlight as the pioneers of this revolution. These materials, endowed with unique properties such as shape-memory and piezoelectricity, are altering the very fabric of mechanical systems. Actuators and sensors harness the potential of smart materials, enabling adaptive and responsive structures that defy conventional engineering limitations.

Nanomaterials, operating at the scale of nanometers, unveil a realm of possibilities. From enhanced strength to improved conductivity, these materials are redefining the boundaries of mechanical engineering. The section navigates through the intricacies of nanotechnology in materials engineering, offering a glimpse into the future where nonmaterial are seamlessly integrated into the mechanical components of various systems.

Advanced composites emerge as the unsung heroes in the quest for lightweight yet durable structures. The marriage of different materials into composites is explored, showcasing their role in high-stress applications and their potential to revolutionize industries where weight is a critical factor.

Aerospace and automotive engineering undergo a paradigm shift with the adoption of next-gen materials. Aircraft and spacecraft benefit from lightweight materials, enhancing fuel efficiency and overall performance. Meanwhile, electric vehicles leverage advanced composites to redefine the parameters of automotive design and efficiency.

Robotics and automation, fueled by the capabilities of smart materials, are experiencing a renaissance. Flexible and adaptable robotic systems, once constrained by rigid structures, now embrace a new level of agility and responsiveness, opening avenues for innovation in automation technologies.

Energy systems are not left untouched by the wave of innovation. Materials for efficient energy conversion and storage are explored, with an emphasis on the role of materials in advancing renewable energy technologies. The quest for sustainable energy solutions is intricately linked to the materials that form the backbone of these systems.

However, this journey into the future of mechanical engineering is not without its challenges. Manufacturing at scale, integration with traditional materials, and navigating regulatory landscapes pose hurdles that require thoughtful consideration. The article delves into these challenges, offering insights into potential solutions and strategies for overcoming them.

As the article draws to a close, it outlines emerging trends in materials science, providing a glimpse into what the future holds for mechanical engineering. The call to action resounds—an encouragement for continued research and development, an invitation for engineers and scientists to push the boundaries of what is possible.

CONCLUSION: "Next-Generation Materials: Innovations Reshaping Mechanical Engineering" serves as a comprehensive exploration of the dynamic and evolving relationship between materials science and mechanical engineering. From the micro-scale wonders of nanomaterials to the macro-scale impact on aerospace and automotive industries, this article encapsulates the spirit of innovation that propels the field forward into uncharted territories.

Smart Cities: How Mechanical Engineering Contributes to Urban Innovation"

MR. VISHANT KUMAR
AP (ME)

The rapid urbanization of our world has given rise to a visionary concept – the Smart City. As cities grow and evolve, the integration of technology becomes paramount for sustainable and efficient urban living. In this context, mechanical engineering emerges as a key player, driving innovation and shaping the very foundations of smart cities.

1. Intelligent Infrastructure Design: Mechanical engineering plays a pivotal role in designing and implementing intelligent infrastructure. From smart buildings with climate-responsive facades to bridges equipped with sensors for structural health monitoring, mechanical engineers contribute to the creation of urban spaces that are not only functional but also responsive to the needs of their inhabitants.

2. Sustainable Energy Solutions: Smart cities prioritize sustainability, and mechanical engineering provides the expertise to develop and implement sustainable energy solutions. Renewable energy sources, coupled with innovative mechanical systems for energy storage and distribution, pave the way for cities that are not only efficient but also environmentally friendly.

3. Transportation Innovations: The heart of any city lies in its transportation system, and mechanical engineering is revolutionizing urban mobility. From the development of electric and autonomous vehicles to the design of efficient public transportation systems, mechanical engineers are at the forefront of creating interconnected and accessible modes of transportation.

4. Waste Management and Environmental Monitoring: In a smart city, waste management is transformed into a sophisticated and data-driven process. Mechanical engineers contribute by designing automated waste collection systems, as well as developing sensor networks for real-time environmental monitoring. These innovations contribute to cleaner and healthier urban environments.

5. IoT Integration and Data Analytics: The Internet of Things (IoT) is a cornerstone of smart cities, and mechanical engineers are instrumental in integrating IoT devices into urban infrastructure. This includes smart grids, intelligent street lighting, and interconnected systems that gather data for analysis. Mechanical engineers use this data to optimize city functions, improve efficiency, and enhance the overall quality of life for residents.

Challenges and Solutions: While the vision of smart cities is compelling, it comes with its share of challenges. Mechanical engineers are tasked with addressing issues such as cyber security, privacy concerns, and the seamless integration of diverse technologies. Solutions involve collaborative efforts with experts in information technology, urban planning, and policy development to create holistic and resilient smart city ecosystems.

The Future of Smart Cities: As technology continues to advance, the role of mechanical engineering in smart cities will only grow. Future innovations may include AI-driven urban planning, advanced robotics for maintenance and construction, and the implementation of circular economy principles. The vision is not just of smart cities but of cities that are adaptive, responsive, and sustainable.

In conclusion, the evolution of cities into smart cities is a testament to the collaborative efforts of various engineering disciplines. Mechanical engineering, with its focus on designing, building, and maintaining physical systems, is a cornerstone of this urban revolution. As our cities continue to transform, the role of mechanical engineering in shaping the future of urban living cannot be overstated.

"Innovations in Renewable Energy Harvesting for Mechanical Applications"

MR. VIVEK
HOD (ME)

The world is undergoing a paradigm shift in its approach to energy, with a growing emphasis on sustainable and renewable sources. In the realm of mechanical engineering, this shift is particularly pronounced as innovations in renewable energy harvesting take center stage. This article explores the cutting-edge technologies and advancements that are reshaping how mechanical systems harness energy from renewable sources.

1. Kinetic Energy Harvesting: One of the forefront innovations in renewable energy for mechanical applications is kinetic energy harvesting. Devices such as piezoelectric materials and electromagnetic generators are being integrated into machinery and structures to capture energy generated by motion. This technology finds applications in everything from industrial machinery to wearable devices, converting movement into a viable power source.

2. Solar-Powered Mechanical Systems: Solar energy is a well-established player in the renewable energy landscape, but recent innovations in solar-powered mechanical systems are expanding its reach. From solar-powered water pumps in agricultural machinery to the integration of photovoltaic materials in rotating mechanical components, engineers are finding novel ways to harness the sun's energy to drive mechanical processes.

3. Vibration and Sound Energy Conversion: Innovative approaches to capturing vibration and sound energy are gaining traction. Mechanical systems exposed to vibrations or sound waves can now be equipped with energy harvesters that convert these mechanical oscillations into electrical energy. This has implications for applications in machinery, transportation, and infrastructure where constant vibrations are present.

4. Thermal Energy Harvesting: Advancements in thermoelectric materials have opened doors for harvesting energy from temperature differentials. In mechanical applications, this involves capturing waste heat generated by machines or industrial processes and converting it into electricity. This not only enhances energy efficiency but also contributes to sustainability by minimizing thermal waste.

5. Wind-Powered Mechanical Devices: Wind energy is a well-established source of renewable power, but innovations in wind-powered mechanical devices are making this form of energy harvesting more versatile. From micro wind turbines integrated into wearable technology to macro-scale applications in industrial settings, capturing the kinetic energy of the wind is becoming more refined and efficient.

Challenges and Solutions: As with any emerging technology, there are challenges associated with the widespread adoption of renewable energy harvesting in mechanical applications. These challenges include the need for efficient storage solutions, the variability of renewable energy sources, and the integration of these technologies into existing systems. Solutions involve advancements in energy storage technologies, sophisticated control systems, and interdisciplinary collaboration among engineers, material scientists, and energy specialists.

The Future Landscape: The innovations in renewable energy harvesting for mechanical applications are indicative of a broader shift towards sustainable and eco-friendly engineering practices. As technology continues to evolve, the integration of multiple renewable energy sources within mechanical systems is expected to become more seamless. The future landscape envisions a world where mechanical processes not only perform efficiently but also contribute to a greener and more sustainable planet.

In conclusion, the innovations in renewable energy harvesting within the realm of mechanical engineering mark a pivotal moment in the pursuit of sustainable energy solutions. These advancements not only enhance the efficiency of mechanical systems but also contribute to the global effort to transition towards a more sustainable and environmentally conscious future.

CERTIFICATE COURSE

The Department of Mechanical Engineering conducted a five days certificate course on "SUPPLY CHAIN MANAGEMENT & LOGISTICS" from 14/12/2020 to 18/12/2020. Mr. Sumit Verma was the resource person of this interactive session.

Objective: The Supply Chain is to make product available to meet customer demand that includes delivery to the appropriate location, on time, in sufficient quantity. Supply Chain Management is focused on doing that in the most efficient and effective way.

Course Outcomes:

- Understand fundamental of Supply Chain Management Concepts.
- Apply knowledge to evaluate and manage an effective supply chain.
- Understand the foundational role of logistics as it relates to transportation and warehousing.
- Analyze and improve supply chain processes.

GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
Bahadurgarh-Jhajjar Road, Kablana (Jhajjar)-Haryana
DEPARTMENT OF MECHANICAL ENGINEERING
Certificate
This is to certify that Mr./Ms. NEHA DOGRA
S/D/o Sh. RAMESH CHANDER of B.TECH CME
bearing Roll no. 8ME002 has successfully completed the certificate course on
SUPPLY CHAIN MANAGEMENT & LOGISTICS from 14/12/2020 to 18/12/2020
Issued on 18/12/2020
Coordinator
Head of Department

CERTIFICATE COURSE

The Department of Mechanical Engineering conducted a five days certificate course on "INDUSTRIAL ROBOTICS" from 07/12/2020 to 11/12/2020. Mr. Parveen Kumar was the resource person of this interactive session.

Objective: This course is designed to develop student's skills in kinematics analysis of robot systems, trajectory planning and robot control.


GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
Bahadurgarh-Jhajjar Road, Kablana (Jhajjar)
DEPARTMENT OF MECHANICAL ENGINEERING
Certificate
This is to certify that Mr./Ms. Pooja
S/D/o Sh. Roll No. 17ME001
of B.Tech (M.E) has successfully completed
the certificate course on "INDUSTRIAL ROBOTICS".
Dated 07th to 11th Dec 2020
Coordinator
Head of Department

Course Outcomes:

- **Demonstrate an ability to apply spatial transformation to obtain forward kinematics equation of robot manipulators.**
- **Demonstrate an ability to solve inverse kinematics of simple robot manipulators.**
- **Demonstrate an ability to obtain the Jacobian matrix and use it to identify singularities.**

CERTIFICATE COURSE

The Department of Mechanical Engineering conducted a five days certificate course on "CNC Machining" from 01/02/2021 to 05/02/2021. Mr. Anand Tyagi was the resource person of this interactive session.

Objective of the Course: This course covers Fundamentals and concepts of CNC Machining and offers more hands on experience through which the participants will be developing CNC programs and machining complicated shapes by using the CNC machine tools.


GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
DEPARTMENT OF MECHANICAL ENGINEERING
Certificate

Course Outcomes :

- **Have knowledge of work and tool holding devices on CNC Machines.**
- **Job setting and simple programming on CNC Machines.**
- **Simulate tool movements programs using software.**
- **Perform machining operations on CNC Machines.**
- **Checking the quality of machined components**

WORKSHOP ON "AUTOCAD"

A Workshop on "Auto CAD" was organized for students of the Mechanical department on 6th of Jan 2021. Mr. Aatishey (Assistant Professor, SRM) was invited as the expert.

Autocad is used to create computer aided designs or software applications including drafting & developing the application in both the 2D and 3D formats and providing the information to the application. Autocad provides tools to design the softwares used in the industry, architectures and project management.

After completing this session, participants will be able to:

- **Demonstrate basic concepts of the AutoCAD software.**
- **Apply basic concepts to develop construction (drawing) techniques.**
- **Understand geometric construction**
- **Produce 2D Orthographic Projections**
- **Understand and demonstrate dimensioning concepts and techniques**

EXPERT LECTURE ON "3D PRINTING & ADDITIVE MANUFACTURING"

An Expert Lecture on "3D printing was organized for students of the Mechanical department on 12th of Feb 2021. Dr. Deepak Chhabra (Assistant Professor UIET, MDU) was invited as the expert.

3D printing is any one of many processes in which a part is additively created by introducing or bonding additional material. 3D printed objects can be geometrically complex and are ideal in a wide variety of manufacturing applications. Machines can cost anywhere from hundreds to millions of dollars and utilize a wide variety of technologies to print parts.

Dr. Deepak Chhabra explained various types of 3D printers, their working principle, the advantages and disadvantages of various printers and the variety of applications of 3D printers. The expert also demonstrated some 3D printed models. The curiosity among the students was at a very high level and they were quite excited to know more about this advanced technology. The students asked many questions and the expert answered them up to their satisfaction level and cleared all the doubts.

After completing the Expert Lecture, the students were given a chance to see the one more live demo of 3D printing and also to see some 3D printed objects.

EXPERT LECTURE ON "CNC PREGRAMMING"

An Expert Lecture on "CNC Programming" was organized for students of the Mechanical department on 11th of May 2021. Mr. Hardial Singh (Assistant Professor, Amity) was invited as the expert.

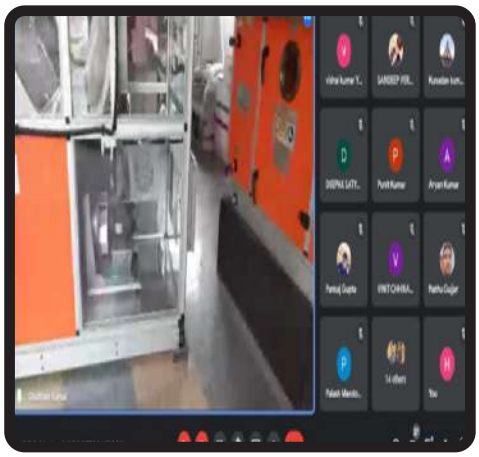
Objective: **Fundamentals and concepts of CNC Machining and offers more hands-on experience through which the participants will be developing CNC programs and machining complicated shapes by using the CNC machine tools.**

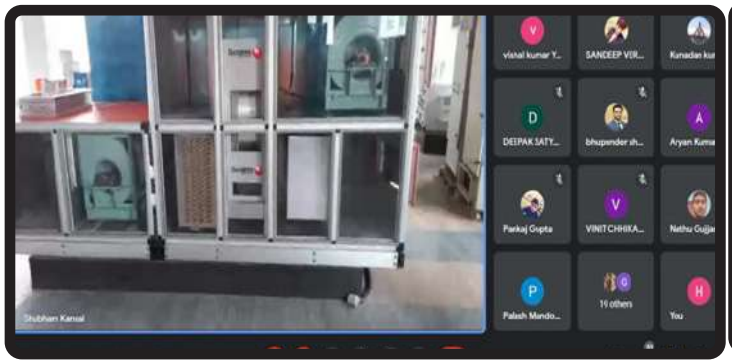
After completing this session, participants will be able to:

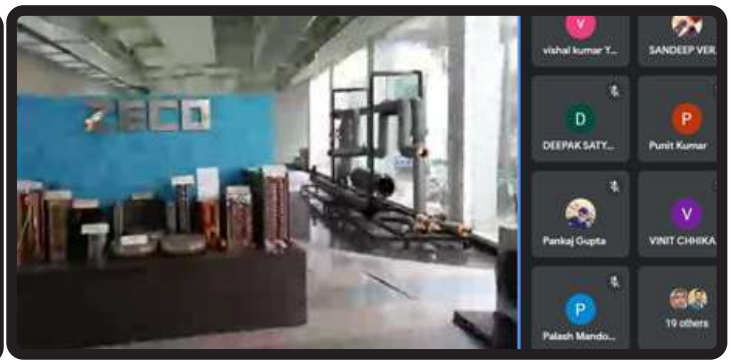
- **Have knowledge of work and tool holding devices on CNC Machines.**
- **Job setting and simple programming on CNC Machines.**
- **Simulate tool movements programs using software.**
- **Perform machining operations on CNC Machines.**
- **Checking the quality of machined components**

VIRTUAL INDUSTRIAL VISIT AT "ZECO AIRCON"

A Virtual industrial visit at ZECO AIRCON was organized for the Students of Mechanical Engineering on 27/05/2021 at 3:30 PM. Company is the leading HVAC and Air Purification solution provider in India. Since inception in 1989, the company has been constantly providing comfortable, clean, and infection-free air to about all the corporate and business houses of India through the range of world-class HVAC products and air purification solutions.







Objective: To make students aware about the working environment of industry.

Mr. Shubham was the speaker, he enlightened the students about the production and operation in industry with product line, competitive advantage of this firm, supply chain and plant layout etc.

Outcomes: On completion of the visit, students will get to know about the Refrigeration and Air Conditioning processes.

MECHANICAL ENGINEERING ACHIEVEMENT

PLACEMENT OF MECHANICAL ENGINEERING

SHIV NARAYAN SHARMA
ORBIT BEARINGS PVT LTD, RAJKOT (GUJARAT)

AMAN PANCHAL
OPTIMA MACHINERIES, BAHADURGARH

ASHWANI KAUSHIK
TUV SUT SOUTH ASIA

MUKUL
BIZCON FINTECH LABS PVT LTD, NOIDA

SAIJAL
SATGURU RO TECHNOLOGIES

MECHANICAL ENGINEERING ACHIEVEMENT

PLACEMENT OF MECHANICAL ENGINEERING

SHARIQUE JAMEEL
AUCTIONEERS & CONTRACTORS PVT. LTD. MUMBAI

ASHISH MISHRA
Motherson Sumi Systems Limited, NOIDA

SAHIL AZAM
AUCTIONEERS & CONTRACTORS PVT. LTD. MUMBAI

SHIVAM SHARMA
DEKHO CAMPUS PVT LTD

PRASHANT SINGH
EVEREST INDUSTRIES LTD

SUMIT KUMAR
TECHSOL ENGINEERING SERVICES PVT LTD

MECHANICAL ENGINEERING ACHIEVEMENT

PLACEMENT OF MECHANICAL ENGINEERING

VIVEK BHARDWAJ
HYDPOWERS, DELHI

MONU
URB ENGINEERING PVT. LTD,
ALWAR (RAJ)

POOJA MAHOUR
SMART PARTS EXPORTS

MECHANICAL ENGINEERING ACHIEVEMENT

MERITORIOUS STUDENTS OF MECHANICAL ENGINEERING

BASHIR MIYA
86.34%

JATIN
78.19%

DINESH
76.97%

MIHIR
76.63%

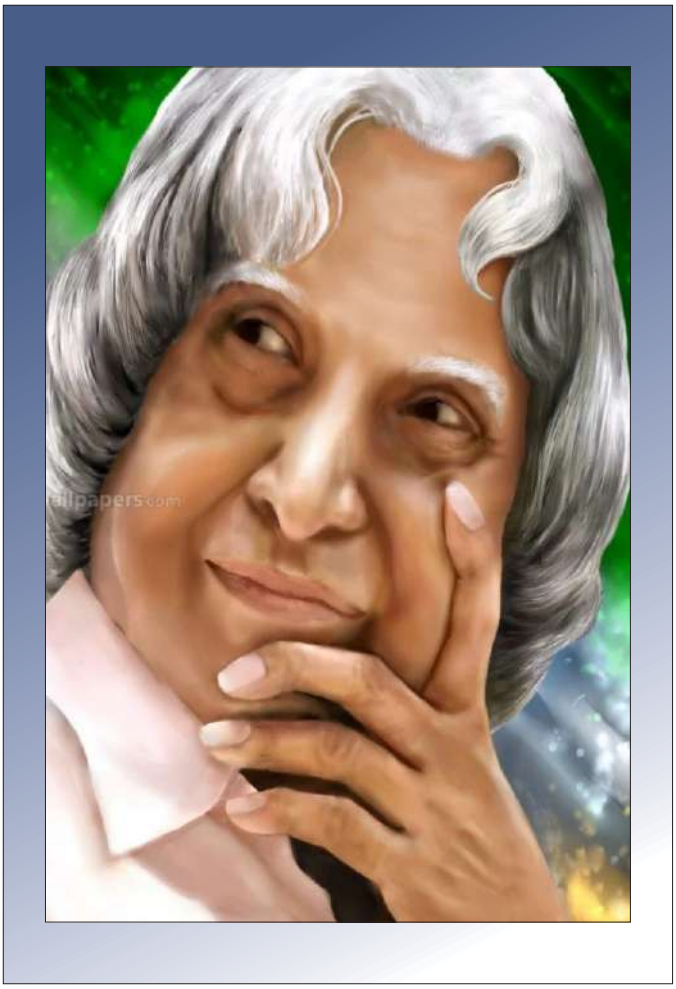
MUKUL
76.07%

MD ARIF
75.68%

JITENDRA
75.30%

GOURAV KUMAR
73.86%

SHRI RAM KUMAR
73.42%



If you fail, never give up because Fail means "First Attempt In Learning."

Dr. APJ Abdul Kalam

PROGRAMMES OFFERED

M. TECH	B. TECH	B. TECH (LEET)
DIPLOMA	DIPLOMA (LEET)	MBA
MCA	BCA	BBA

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