



**GEMS POLYTECHNIC
COLLEGE**

GEAR UP

NEWSLETTER •

Department of Mechanical Engineering

GET IN GEAR WITH MECHANICAL ENGINEER

A person who never made a mistake never tried anything
new." –Albert Einstein

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GEAR UP

Half-Yearly News Letter

April - October 2022, Volume – II, Issue -2

Department of Mechanical Engineering

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From the Desk of the HOD



I am pleased to provide a brief update on the latest developments within our esteemed Mechanical Engineering Department. As we navigate the challenges and opportunities that come

with academic excellence, I am inspired by the dedication and passion demonstrated by each member of our department.

1. Academic Achievements: The commitment to delivering high-quality education is reflected in the achievements of our students, who consistently demonstrate excellence in their coursework and projects.

2. Industry Collaborations: Our efforts to foster meaningful collaborations with industry partners are yielding positive results. These partnerships provide valuable opportunities for our students to gain real-world experience and for our faculty to contribute to industry advancements.

3. Student Engagement: Our students are the heart of our department, and their involvement in extracurricular activities, competitions, and community outreach initiatives is commendable. I encourage all students to take full advantage of the resources and actively participate in departmental events and activities.

4. Future Endeavors: As we move forward, let us focus on our shared goals of academic excellence, research innovation, and holistic student development. The future holds exciting possibilities, and together, we can continue to shape the Mechanical Engineering Department into a hub of knowledge, creativity, and success.

I extend my sincere appreciation to the entire department for your hard work, dedication, and collaborative spirit. It is through our collective efforts that we will continue to achieve new heights and make a lasting impact on the field of mechanical engineering.

VISION OF THE DEPARTMENT

To empower the students in the field of Mechanical engineering by providing quality education and technical skills favorable for the development of the state and nation.

MISSION OF THE DEPARTMENT

The Department of Mechanical Engineering is committed, **M1:** To deliver fundamental and skill-based education in mechanical engineering through innovative practices in teaching and learning.

M2: To improve employability through Industrial interaction and collaboration.

M3: To inculcate ethical practices for social upliftment and to uphold human values.

PROGRAM EDUCATIONAL OBJECTIVES:

PEO1: To develop technically competitive diploma engineers in the challenging areas of design and manufacturing and its associated industries in the domain of mechanical engineering being involved.

PEO2: To motivate the diploma engineers to improve their academic career by involving in doing higher education and continuous learning.

PEO3: To Possess a professional attitude as an individual and as a team member with consideration for society, professional ethics and environmental factors.

PROGRAM SPECIFIC OUTCOMES:

PSO1: Ability to develop and implement innovative ideas in the area of product development with the help of modern CAD & 3D printing tools.

PSO2: Ability to achieve excellence in the domain of Computer Numerical Control (CNC) operations.

PSO3: Ability to achieve excellence in advanced manufacturing skills for various industrial sectors.

Embrace the Journey: Inspirational Quotes

- ❖ "The engineer has been, and is, a maker of history." - James Kip Finch
- ❖ "Success is stumbling from failure to failure with no loss of enthusiasm." - Winston Churchill
- ❖ "Engineering is the closest thing to magic that exists in the world." - Elon Musk
- ❖ "You don't have to be great to start, but you have to start to be great." - Zig Ziglar
- ❖ "The best way to predict the future is to invent it." - Alan Kay
- ❖ "The future belongs to those who believe in the beauty of their dreams." - Eleanor Roosevelt
- ❖ "In the middle of difficulty lies opportunity." - Albert Einstein

Department Activities

The Orientation program for the second- and third-year mechanical engineering department was conducted on the 01st of April 2022 at the seminar hall. The Program started at 2:15 pm and was completed at 3:50 pm and provided with refreshments. The orientation program went well and it was fruitful for the students.



ORIENTATION PROGRAM
 Department of Mechanical Engineering
 2021-2022

Date: 01/04/2022

The power of gathering: it inspires us, delightfully, to be more hopeful, more joyful, more thoughtful: in a word, more alive.

Come! Join with Us!

Time: 2:15 pm
Venue: Seminar Hall

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The Department GEAR-UP Association program for the second mechanical engineering department was conducted on the 24th of September 2022 at the seminar hall. The Program started at 2:00 pm and was completed at 4:00 pm provided with refreshments. The Association program went well and it was fruitful for the students. We encouraged the students who achieved top marks in the third-semester exam and excellence in attendance.

ISTE Student Chapter Activities:

- The Department of Mechanical Engineering Conducted a “Technical Quiz” under the ISTE Student Chapter.
- 27 students from 2nd & 4th-semester Mechanical Engineering participated and the final round was conducted on 03rd September 2022 the students were selected for the first, second and third prize categories.



- The prize was distributed in the CNC Addon Course Valedictory function.

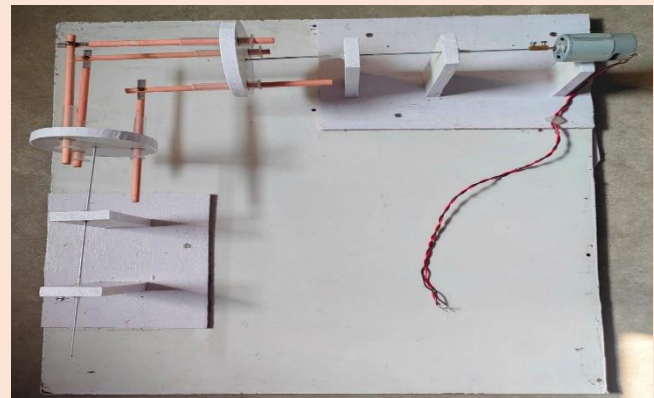
Students Activities

Project Details (FEEL -ENG & J-Component / Academics)

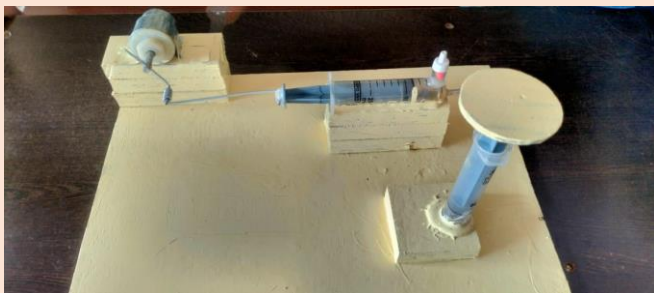
It was made with the help of a student and the lab assistant. The head part is made from scrap materials and Mechanical engineering word is written by 3200 screws.



- **Two Cylinder Air Compressors.**



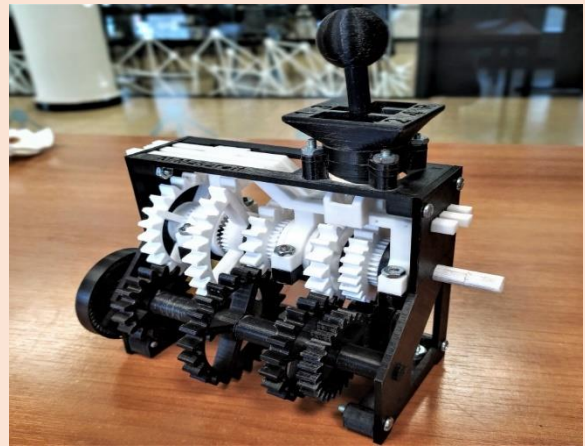
- **Gearless Transmission:**



- **Hydraulic Robotic Arm**



- **Air Compressor Hydraulic Lifts**



Add on Course - (With Pics and Banner Photos):

Course Title: "CNC Programming & Machining".

Course Duration: 14th September 2022 to 22nd September 2022.

Course Content:

Introduction to CNC Machines,

Callipers Handling, Tolerance,

Technical Drawing, Hand Wheel Usage,

Tool Calibration and Programming with G & M Codes.

It's an elated joy to share about the Add-on Course conducted by the Mechanical Engineering Department for second-year Mechanical Engineering students. International course instructors with a course curriculum of international standards were the promising highlights of the event.



Mr. Jonathan Bodimer, a talented professional and an expert process mechanic who is working in a reputed company named Poppelmann in Germany was the course instructor.

Running a mile ahead of the world is the need of this modern era and we believe that the efforts taken by the Course Instructor and the Mechanical engineering department to pass on exceptional skills to their students would locate the students a mile ahead of their competitors and a mile close to success.



Achievements/Success Stories

➤ Success Stories (Testimony of Student Life)



I'm **Rakesh Tiwary**
Department of Mechanical
Engineering batch 2019-
2022 from Gems
Polytechnic College. I've
been working in Gabriel
India Limited company for
the last 4 months. Many
things I learned over the past
3 years at Gems Polytechnic

College. For example, Discipline, time management, spending time with the best teacher, and learned different lab work. CAD designing CNC programming, workshop technology.



I'm **Vishal Ranjan**
Department of mechanical
engineering batch 2019-
2022 from Gems
Polytechnic College. I
joined B.Tech at Darbhanga
College of Engineering,
Darbhanga, Bihar. At
GEMS Polytechnic College

I learned very good discipline. My English communication is very good now. They provided Proper knowledge for all the subjects. Teachers and students have better interaction. Practical sessions of all subjects were very good. All books are available in the library. The staff and teachers are very cooperative. We had a better hostel facility. The Playground is very well maintained. I Feel proud of this college.

The Impact of Technology in Mechanical Engineering

3D Printing:

3D printing is a process of making three-dimensional objects from a digital file. This rapidly growing technology has revolutionised how mechanical engineers design and produce parts and components.



- 3D printing also allows for the creation of custom parts and components quickly and easily
- It can reduce the cost and time associated with traditional manufacturing processes.
- As technology advances, the cost of 3D printing will decrease, and the quality of the parts and components produced will increase.
- In the medical industry, 3D printing technology can be involved in creating the following,
 - Custom prosthetics
 - Bionic Hands
 - Prosthetic upper limb
 - Implants
 - Medical devices
- In the automotive industry, 3D printing technology can produce parts and components for,
 - Cars
 - Trucks
 - Electric vehicles

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