

DEPARTMENT OF
MECHANICAL ENGINEERING

MECH PULSE

2026

INNOVATE | INSPIRE | IMPACT



IDEATE



DESIGN



DEVELOP



ACHIEVE

POWERED BY PASSION, DRIVEN BY INNOVATION



HARIKISHORE SINGH
GOVERNMENT POLYTECHNIC, SHEOHAR



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MECH PULSE 2026

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Machines don't create the future.

Engineers do.



• ABOUT THE INSTITUTE •

Harikishore Singh Government Polytechnic, Sheohar is one of the premier technical institutions in the state of Bihar, dedicated to imparting quality technical education and fostering professional excellence among students.



Harikishore Singh Government Polytechnic, Sheohar is one of the premier technical institutions in the state of Bihar, dedicated to imparting quality technical education and fostering professional excellence among students. The institute was **established in the year 2015** with the objective of producing skilled and competent diploma engineers. Since its inception, it has been striving to create a conducive learning environment that promotes academic achievement, innovation, and holistic development.



The institute is approved by the **All-India Council for Technical Education (AICTE), New Delhi**, and is affiliated with the **State Board of Technical Education (SBTE), Bihar, Patna**.



At the time of establishment, the institute offered diploma programmes in four core engineering branches, namely **Civil Engineering, Mechanical Engineering, Electrical Engineering, and Electronics Engineering**, each with an intake capacity of **60 students**.



In response to the growing demand for technical education and industry requirements, the institute expanded its academic offerings by introducing the **Computer Science and Engineering (CSE) branch in 2023**, with an intake capacity of **60 students**.



Additionally, the intake capacity of the **Civil Engineering branch** was increased to **120 students**, reflecting the institute's continuous growth and commitment to providing greater opportunities for aspiring engineers.



The institute remains committed to its mission of **empowering young minds** through technical education and creating opportunities for lifelong learning, leadership, and sustainable development.



Quality Education



Innovation



Holistic Development



Bright Future

Empowering Youth... Enriching Future...

Message from PRINCIPAL'S DESK

“

It gives me immense pleasure to present this edition of the Annual Magazine of the Mechanical Engineering Department, Harikishore Singh Government Polytechnic, Sheohar.

At our institute, we are committed to providing quality education, fostering innovation, and creating an environment that encourages students to excel in academics, technical activities, research, sports, and cultural pursuits. The Mechanical Engineering Department has consistently demonstrated its dedication towards achieving these goals through various academic initiatives, laboratory activities, industrial visits, workshops, seminars, and student development programmes.

I congratulate the Head of the Department, faculty members, editorial team, and students for their sincere efforts in bringing out this publication. I am confident that this magazine will serve as a valuable source of inspiration and information for readers while highlighting the accomplishments of the department.

I extend my best wishes to all students for their future endeavours and encourage them to continue striving for excellence, innovation, and lifelong learning.

”



Principal
Dr. Diwakar Bhagat

B.Tech. (Civil), M.Tech. & Ph.D.
(Structural Engineering), IIT Delhi.

Hari Kishore Singh Government Polytechnic,
Sheohar



QUALITY
EDUCATION



INNOVATION &
RESEARCH



STUDENT
DEVELOPMENT



EXCELLENCE IN
PRACTICE



INTEGRITY &
ETHICS

MESSAGE FROM HOD

Department of Mechanical Engineering

It is a matter of great pride and pleasure to present the Annual Magazine of the Department of Mechanical Engineering.



Mechanical Engineering is one of the oldest and broadest branches of engineering, playing a crucial role in the development of industries, infrastructure, energy systems, transportation, manufacturing, and emerging technologies. In today's rapidly evolving technological landscape, mechanical engineers are expected not only to possess strong technical knowledge but also to demonstrate creativity, innovation, problem-solving ability, and professional ethics.



The Department of Mechanical Engineering at Harikishore Singh Government Polytechnic, Sheohar is committed to providing quality technical education through a balanced combination of theoretical learning, laboratory practice, industrial exposure, and skill development activities. Our department continuously strives to create an environment that nurtures curiosity, critical thinking, teamwork, and lifelong learning among students.



I congratulate the editorial team, faculty members, and students who have contributed their valuable articles, technical papers, creative works, and achievements to make this publication meaningful and informative. Their dedication and enthusiasm deserve sincere appreciation.



I extend my best wishes to all students for a bright and successful future.



“ Together, let us continue to strive for excellence, embrace innovation, and build a better tomorrow through the power of engineering. **”**

Rajesh Kumar

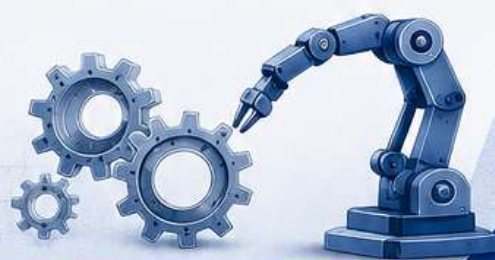
(Rajesh Kumar)

Head of Department

Department of Mechanical Engineering

Harikishore Singh Government

Polytechnic, Sheohar



**QUALITY
EDUCATION**



**SKILL
DEVELOPMENT**



**INNOVATION &
CREATIVITY**



**TEAMWORK &
COLLABORATION**



**EXCELLENCE IN
EVERY ENDEAVOR**

FROM THE EDITOR'S DESK

It gives me immense pleasure to present this edition of the **Mechanical Engineering Department Annual Magazine**. This magazine is a reflection of the dedication, creativity, achievements, and collective efforts of our students and faculty members throughout the academic year.

Engineering education extends beyond classrooms and laboratories. It is a journey of learning, innovation, teamwork, and continuous improvement. This magazine has been designed to capture that journey by showcasing the academic accomplishments, technical activities, industrial visits, workshops, seminars, projects, cultural events, sports achievements, and creative contributions of our students.

The Department of Mechanical Engineering has always encouraged students to explore new ideas, develop practical skills, and participate actively in activities that contribute to their overall growth. The articles and achievements featured in this magazine demonstrate the enthusiasm, talent, and potential of our budding engineers. I hope that these contributions will inspire readers to think creatively, work diligently, and pursue excellence in their chosen fields.

This publication also serves as a valuable record of the department's progress and accomplishments. It highlights our commitment to quality education, skill development, innovation, and outcome-based learning. Through such initiatives, we aim to nurture competent engineers who are technically proficient, socially responsible, and prepared to meet the challenges of the modern world.

I sincerely thank the Principal, Head of the Department, faculty members, student contributors, and the editorial team for their wholehearted support and cooperation in making this publication a success. Their enthusiasm and dedication have played a vital role in bringing this magazine to fruition.

I hope that this magazine will not only inform and inspire its readers but also strengthen the spirit of learning, creativity, and innovation within our department.

Wishing all our students a bright, successful, and fulfilling future.



Our Commitment



QUALITY EDUCATION



SKILL DEVELOPMENT



INNOVATION



TEAMWORK



EXCELLENCE

Prof. Shishu Ranjan

Lecturer, Department of Mechanical Engineering
Harikishore Singh Government Polytechnic, Sheohar



ABOUT THE DEPARTMENT



The Department of Mechanical Engineering is one of the founding departments of Harikishore Singh Government Polytechnic, Sheohar, established in the year 2015 with an intake capacity of 60* students.



The department strives to provide a strong foundation in these areas through a well-structured curriculum prescribed by the State Board of Technical Education (SBTE), Bihar.



The department is supported by a team of qualified and dedicated faculty members who are committed to academic excellence and student development. Emphasis is placed on outcome-based education, practical learning, skill development, innovation, and industry-oriented training. The faculty members continuously guide students in academic activities, technical projects, seminars, workshops, and industrial visits to enhance their professional competencies.



The department possesses well-equipped laboratories and workshops that facilitate hands-on learning and practical exposure. Major laboratories include:

- Thermal Engineering Laboratory
- Refrigeration and Air Conditioning Laboratory
- Fluid Mechanics Laboratory
- Strength of Materials Laboratory
- Metrology and Measurement Laboratory
- Manufacturing Technology Laboratory
- Electric Vehicle Laboratory
- CAD/CAM Facilities



To bridge the gap between academia and industry, the department regularly organizes industrial visits, expert lectures, technical seminars, skill development programmes, and internship opportunities.

“

*Learning Today,
Leading Tomorrow
through
Mechanical Excellence.*

”



VISION

To be a leading department in producing skilled mechanical professionals, equipped with multidisciplinary knowledge and practical skills to meet the evolving demands of modern industry and sustainable technologies.



MISSION

M1

To provide strong fundamental and practical knowledge in mechanical engineering through effective teaching learning process.



M2

To develop competent Diploma graduates by offering hands on skill in manufacturing, machine tools and modern workshop practices.



M3

To inculcate professional ethics, teamwork, communicating skills, safety awareness and workplace discipline essential for successful employment.



Faculty Of Mechanical Department



Prof. Rajesh Kumar
HOD Mechanical **Engg.**



Prof. Vikash kumar
Lecturer, Mech Dept.



Prof. Kapil Deo Kumar
Lecturer, Mech Dept



Prof. Shishu Ranjan
Lecturer, Mech Dept



Prof. Aditya Swaroop
Lecturer, Mech Dept



Prof. Deepak Kumar
Lecturer, Mech Dept

INSTRUCTORS



Mr. Abhay Kumar Singh



Mr. Rahul Kumar



LAB FACILITIES



State-of-the-Art Labs for Practical Learning & Innovation



ELECTRIC VEHICLE LAB



Hands-on learning on electric vehicle technology, power electronics, battery systems, motor drives, and EV components.



IOT LAB

Exploring the world of IoT with sensors, microcontrollers, connectivity, and real-time data monitoring systems.



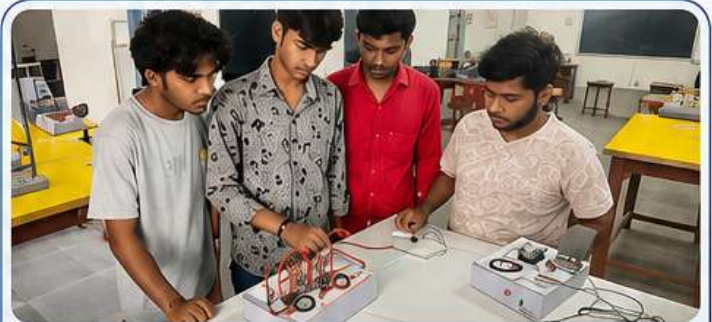
HYDRAULICS LAB

Practical exposure to hydraulic components, circuits, pumps, valves, and their applications in real-world systems.



LANGUAGE LAB

Enhancing communication skills through interactive sessions, audio-visual learning, and advanced language software.



PHYSICS LAB

Experiments that build strong fundamentals in mechanics, electricity, optics, and modern physics principles.

LEARN • EXPLORE • INNOVATE • EXCEL



MODERN EQUIPMENT

Well-equipped labs with advanced instruments



EXPERT GUIDANCE

Experienced faculty for better learning



PRACTICAL LEARNING

Hands-on practice for real-world skills



INNOVATION DRIVEN

Encouraging creativity, research & development



CAREER FOCUSED

Building skills for a successful future

LAB FACILITIES



Advance Manufacturing Lab

The lab is equipped with modern machines and tools that help students gain practical knowledge in advanced manufacturing processes, machine operations, and industrial practices.



Measurement & Metrology Lab

This lab provides hands-on experience in precision measurement, calibration, and inspection techniques using various modern measuring instruments and equipment.



Thermal Engg Lab

The lab is designed to provide practical exposure in the field of thermodynamics, heat transfer, fluid flow, and energy conversion through experiments on different thermal equipment and systems.



Workshop

The workshop provides practical training in machine tools, fabrication, fitting, and basic engineering operations. It helps students develop hands-on skills, workshop safety awareness, and industrial work culture.



Our well-equipped laboratories and workshop play a vital role in developing technical skills, practical knowledge, and innovation among students. These facilities support hands-on learning and prepare them for future industrial challenges.

ACADEMIC ACTIVITIES

To enhance students' understanding of emerging technologies and industry practices, expert lectures are conducted by academicians, industry professionals, and technical experts. These sessions provide valuable insights into recent advancements in fields such as **Electric Vehicles, Renewable Energy, Automation, Manufacturing Technology, CAD/CAM, and Industry 4.0.**



Induction Program



Class Room



Smart – Class Room



*Learning today,
Leading tomorrow.*

“

*Academic activities
inspire creativity,
build confidence,
and shape
a better future.*

”



Project Work



ACADEMIC ACTIVITIES

Empowering Knowledge... Enhancing Skills... Shaping Futures...



LIBRARY

The department library is a rich source of knowledge that supports teaching, learning, and research. It is well-stocked with textbooks, reference books, journals, magazines, and e-resources related to Mechanical Engineering and allied subjects. A peaceful environment encourages students to read, explore, and expand their horizons.



READING ROOM

The reading room provides a calm and comfortable atmosphere for students to concentrate on their studies. It is equipped with ample seating and proper lighting to facilitate effective learning and self-study. Newspapers, reference materials, and academic resources are available to keep students updated with current affairs and technical developments.



WORKSHOP DEMONSTRATIONS

Hands-on learning is an integral part of mechanical engineering education. Workshop demonstrations help students understand the working principles of tools, equipment, and machines through practical exposure. These sessions enhance technical skills, safety awareness, and confidence in using workshop machines and instruments.



“PRACTICAL KNOWLEDGE
BUILDS COMPETENCE,
ACADEMIC ACTIVITIES
SHAPE EXCELLENCE.”



LEARN



EXPLORE



EXPERIENCE



EXCEL

CENTRE OF EXCELLENCE (COE)

(COLLABORATION WITH IIT PATNA)

We are proud to be a **Hub Centre** for **Electric Vehicle** and a **Spoke Centre** for **IoT** under the COE initiative in collaboration with IIT Patna.



HUB CENTRE FOR ELECTRIC VEHICLE

- » Advanced training & research on Electric Vehicle technologies
- » Hands-on learning with EV systems, components & diagnostics
- » Promoting sustainable mobility and green energy solutions



SPOKE CENTRE FOR IoT

- » Skill development in IoT technologies and applications
- » Hands-on with IoT devices, sensors & cloud platforms
- » Enabling smart solutions for real-world challenges



COLLABORATION BENEFITS



Access to IIT Patna's expertise, resources & infrastructure



Enhanced learning, research and innovation opportunities



Industry-oriented training for future-ready skills



Promoting quality education and technological advancement



“

INNOVATE

• COLLABORATE

• TRANSFORM

”

DEPARTMENT ACTIVITIES



MOU WITH INDUSTRIES

The department has established collaborations with various industries through Memorandum of Understanding (MOU) to enhance practical exposure, skills development, and placement opportunities for students.



FACULTY DEVELOPMENT PROGRAM

Faculty members actively participate in Faculty Development Programs (FDPs) to upgrade their knowledge and skills, ensuring effective teaching and academic excellence.



EXPERT TALKS

The department organizes expert talks by industry professionals and academicians to provide insights into emerging technologies, innovations, and industry trends.



Industry
Collaboration



Knowledge
Sharing



Skill
Development



Professional
Growth

DEPARTMENT ACTIVITIES



INTERACTION WITH INDUSTRY EXPERT

Industry experts are invited to interact with students, providing valuable insights into industry practices, trends, and career opportunities.



START UP TALKS

Start-up talks inspire students by exposing them to entrepreneurial journeys, innovative ideas, and the challenges of building a successful venture.



FINANCIAL LITERACY

Financial literacy sessions empower students with essential knowledge on saving, investing, budgeting, and smart financial planning for a secure future.



PRE PLACEMENT TALKS

Pre-placement talks prepare students for placement drives by enhancing their communication skills, resume building, and interview techniques.



Industry
Exposure



Skill
Development



Knowledge
Sharing



Career
Readiness

PLACEMENT HIGHLIGHTS 2025

• MECHANICAL ENGINEERING •

Our Talent, Their Success – Building Careers, Creating Futures

We are proud to share the outstanding placement performance of our 2025 passout batch (Mechanical Engineering). Our students have been recruited by leading companies and prestigious organizations, reflecting their hard work, skills, and the quality education they received.

PLACEMENT PARAMETERS

Placement Parameter	Key Figures / Benchmarks
Highest Salary Package Offered	Rs. 3.0 – 3.50 Lakhs per annum
Average Salary Package Offered	Rs. 2.50 – 3.00 Lakhs per annum
Primary Placement Sectors	Automobile, Construction, Electronics, Manufacturing



OUR TOP RECRUITERS



**TATA ELECTRIC
VEHICLE**



**TATA MOTORS
PASSENGER VEHICLES**

Subros

SUBROS

**krishna
maruti**

KRISHNA MARUTI

OUR STUDENTS PLACED IN PRESTIGIOUS ORGANISATIONS



BARC
(Bhabha Atomic
Research Centre)



HPCL
(Hindustan Petroleum
Corporation Limited)



**AND MANY MORE
GOVERNMENT ORGANISATIONS**

“ Our students are not just getting jobs, they are building successful careers with leading companies and prestigious organizations. ”

**Congratulations to our talented students
for their well-deserved success!**

GALLERY



SPORTS ACTIVITIES

Encouraging students to participate in various sports activities to build physical fitness, discipline, team spirit and a healthy competitive mindset.

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VISHWAKARMA PUJA

Vishwakarma Puja celebrated with devotion and enthusiasm to seek the blessings of Lord Vishwakarma for knowledge, skills, and success in our technical pursuits.

.....



PLANTATION ACTIVITIES

Plantation drives organized to promote environmental awareness, greenness, and our responsibility towards a sustainable and better tomorrow.

.....



Inspiration in Motion...

— Thoughts that **Drive**, Ideas that **Inspire**. 

“ Mechanical engineering is not just about machines, it's about solving real-world problems and improving lives.

— **Elon Musk**

“ The art of mechanical engineering is the art of making useful things from resources which are not useful.

— **Thomas Tredgold**

“ Engineering is the closest thing to magic that exists in the world.

— **Elon Musk**



“ A machine is never better than the man who built it.

— **Elbert Hubbard**



“ The world needs dreamers and the world needs doers. But above all, the world needs dreamers who do.

— **Sarah Ban Breathnach**



“ The role of an engineer is to make the world a better place.

— **Henry Petroski**



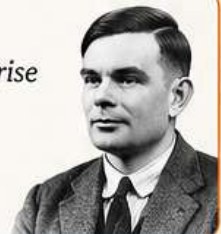
“ Success in engineering does not come from luck, it comes from dedication, perseverance and a passion for creating solutions.

— **A. P. J. Abdul Kalam**



“ Machines take me by surprise with great frequency.

— **Alan Turing**



“ You can't build a reputation on what you are going to do.

— **Henry Ford**



“ Precision, perseverance and passion are the gears that drive an engineer to greatness.

— **Unknown**



DESIGN IT. BUILD IT. SOLVE IT.

That's the power of Mechanical Engineering.

➤ *Keep Innovating, Keep Inspiring!* ➤



**HARIKISHORE SINGH
GOVERNMENT POLYTECHNIC, SHEOHAR**
LEARN | INNOVATE | EXCEL

