

MECH-TECH

VOL 1

1. **Vision Mission**
2. **PEOs**
3. **Committee**
 - a. **Chief Editor (HoD) – Mr. A. R. Nadaf**
 - b. **Executive Editor – Mrs. S. K. Mestri**
 - c. **Faculty Member –**
 1. **Mr. T. P. Kulkarni**
 2. **Mrs. N. H. Ghevade**
 - d. **Student Members-**
 1. **Mr. Sanraj Patil (TY Mech)**
 2. **Mr. Arjun Narsugade (SY Mech)**

Chief Editor's Desk:-

The Mechanical Engineering Department established in 2010 has intake of 60 students. Mechanical Engineering is one of the major streams in the engineering profession and its principles are involved in the design, development, production and construction of nearly all of the physical devices and systems. Mechanical engineers use the basic principles of motion, energy, and force to design and manufacture a vast-range of products.

Mechanical Engineering is a creative profession in which students are trained to conceive, construct, test, and operate all kinds of mechanical, thermal, and biomedical devices. The Department along with well-equipped teaching staff also has well established Machine shop & Workshop, CNC Lab, Fluid Mechanics & Machinery Lab, Thermal Engineering Lab, Theory of Machine Lab, Manufacturing process Lab, Mechanical Engineering Materials Lab, Metrology & Quality Control Lab, Industrial Fluid Power Lab, along with the Academic development, various activities are organized to develop soft skills of the students such as Paper Presentation, Industrial Visits and Expert Lectures etc.

The Mechanical Engineering Department at BSIET Polytechnic aims to create high-caliber mechanical engineers for a demanding profession which helps them to learn how to design and conduct experiments and to collect, analyze, and interpret data

-Mr. A. R. Nadaf

Vision:

- To be the preferred department of skill-based education in mechanical engineering for producing competent industry professionals with responsible contribution towards manufacturing sector.

Mission:

- M1 – To impart skill-oriented quality education for enriching students learning experience. (Quality Education in OBE process)
- M2 – To develop critical thinking and problem-solving attitude and by providing hands-on experiential training (Critical Thinking and Research Skills)
- M3 – To encourage students and teachers for frequent industry interactions towards better skilling, entrepreneurship and job opportunities. (Industry Professionals, skilling)
- M4 – To instill professional ethics, environment safety, communal harmony and sensitize all the stakeholders towards upliftment of our society. (Sensitizing towards nation building).

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO-1 –Domain knowledge – Diploma Graduates will make use of their technical knowledge along with practical hands-on skills for analyzing and solving real problems in Mechanical industry.

PEO-2 –Professionalism – Diploma Graduates will apply modern tools, high ethical standards, professional & soft skills for the growth of their organization.

PEO-3 -Lifelong learning – Diploma Graduates will utilize their lifelong learning abilities to upgrade their knowledge & skills for accelerating their professional career growth.

Academic Achievements

MSBTE RESULT WINTER 2025

F.Y. MECHANICAL ENGINEERING



PATIL SAPTASHRI RAVIRAJ
80.35%



YERUDKAR BHAKATI SANJAY
78.24%



MALAGE ISHA PRASHANT
75.41%

S.Y. MECHANICAL ENGINEERING



Kedar Pralhad Sawant
Percentage : 82.44%



Karan Prakash Porlekar
Percentage : 75.89%



Ishant Rajanish Powalkar
Percentage : 75.00%

T.Y. MECHANICAL ENGINEERING



Sanraj Arvind Pati
Percentage : 93.65%



Shrushti Vasant Desai
Percentage : 92.94%



Sarthak Sujit More
Percentage : 85.41%

Faculty list

Sr. No.	Staff Name	Qualification	Designation
1	Mr. A. R. Nadaf	M.E. Mechanical Design Engineering	HOD
2	Mr. B. B. Patil	M. E. Design (Applied)	Lecturer
3	Mrs. P. S. Khade	M. E. Production (Applied), M. B. A (HR)	Training Placement Coordinator
4	Mr. J. A. Mullani	Ph. D (Appearing), M. Tech Machine Design	Workshop Superintendent
5	Mr. T. P. Kulkarni	M.E. Production (Appearing),	Lecturer
6	Mrs. S. K. Mestri	M. Tech Heat Power Engineering (Appearing), M. B. A(HR)	Lecturer
7	Mr. B. D. Mane	M. Tech Design Mechanical(Appearing)	Lecturer
8	Mrs. N. H. Ghewade	M. Tech Thermal Engineering	Lecturer
9	Mr. P. P. Patil	B. E. Mechanical	Lecturer

Industrial Visit

MSRTC Workshop-

The Mechanical Engineering Department arranged Industrial visit on 17/09/2025, Wednesday to the MSRTC Workshop, MIDC Gokul Shirgaon, Kolhapur for the third year student.



Maruti Technical Service-

The Mechanical Engineering Department arranged Industrial visit on 18/09/2025, Thursday to the Maruti Technical Services Shahupuri, Kolhapur for the third year student.



Wilo Mather and Platt Pumps-

The Mechanical Engineering Department arranged Industrial visit on 20/09/2025, Thursday to the Wilo Mather and Platt Pumps PVT. Ltd., MIDC Gokulshirgaon, Kolhapur for the second year student.



Warana Sahakari Sakhar Kharkhana-

The Mechanical Engineering Department arranged Industrial visit on 06/10/2025, Monday to the Warana Sahakari Sakhar Karkhana, Warananagar Kolhapur for the second year student.



Kirloskar Oil Engine-

The Mechanical Engineering Department arranged Industrial visit on 07/10/2025, Tuesday to the Warana Sahakari Sakhar Karkhana, Warananagar Kolhapur for the third year student.



Expert lecture

Implementation of Bajaj Manufacturing System

Guest Lecture was conducted by the Department of Mechanical, on **06/08/2025 Wednesday** at **2.30PM** onward. The resource person **Mr. Yogesh Gijvane** Project Coordinator, Tata strive (BMS), Pune, has taken a lecture on topic **“Implementation of Bajaj Manufacturing System”** for second year students.



Personality Development Program

Guest Lecture was conducted by the Department of Mechanical, on **19/09/2025 Friday** at **11.00 AM** onward. The resource person **Mr. Mahesh Torgalkar**, Advance Engineering, MIDC, Gokul Shirgaon, Kolhapur has taken a lecture on topic **“Personality Development Program”** for Third year students.



Essence of Indian Constitution

Guest Lecture was conducted by the Department of Mechanical, on **19/09/2025 Friday** at **11.00 AM** onward. The resource person **Mr. Mahesh Torgalkar, Advance Engineering, MIDC, Gokul Shirgaon, Kolhapur** has taken a lecture on topic **“Essence of Indian Constitution”** for Second year students.



Personality Development Lecture

Guest Lecture was conducted by the Department of Mechanical, on 19/09/2025 Friday at 11.00 AM onward. The resource person **Mr. Mahesh Torgalkar, Advance Engineering, MIDC, Gokul Shirgaon, Kolhapur** has taken a lecture on topic **“Personality Development Program”** for Third year students.



Dasara Celebration (खंडे नवमी)

02/10/2025 Thursday

Khandenavami was celebrated with great enthusiasm at the Mechanical Engineering Department of Dr. Bapuji Salunkhe Institute of Engineering and Technology. Khandenavami is celebrated on the ninth day of Navratri (Ashwin Shuddha Navami). On this day, warrior communities worship their weapons, and artisans worship their tools.

In Maharashtra and Rajasthan, there is a tradition of worshiping weapons and tools as deities on this day. Both these states give great importance to Khandenavami. In Maharashtra, after worshiping weapons on this day, warriors would cross the border and embark on a mission on the next day (Vijaya Dashami).



Life Skills Development Program

A three-day "Life Skill Development Program" was successfully conducted at Dr. Bapuji Salunkhe Institute of Engineering and Technology from 27th to 29th September 2025. The program received an overwhelming response from students and was conducted by trainers from TWJ Institute. The program was organized by the Training and Placement Department of the institute



कोल्हापुर, महाराष्ट्र, भारत 🇮🇳

P67q+g8r, वरना कॉलोनी, कोल्हापुर, महाराष्ट्र 416003, भारत

Lat 16.713678° Long 74.238174°

28/09/2025 12:58 PM GMT +05:30



CAD Training Program

CAD Training Program was conducted by the Department of Mechanical, on 23rd to 24th September 2025 for Second year students

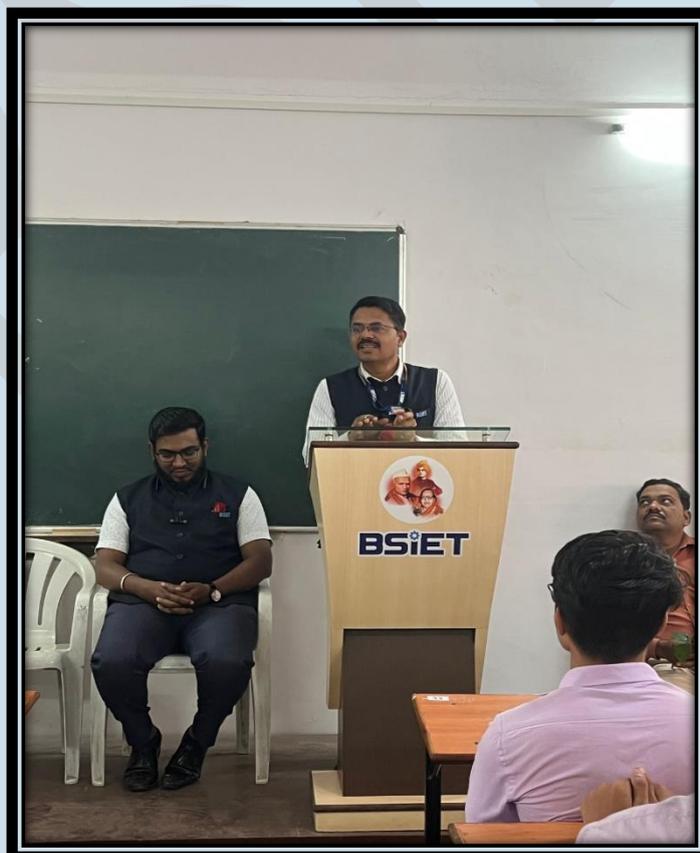




Extra co-curricular Activity

Guru Purnima Celebration

On 10th July 2015, the Mechanical Engineering Department celebrated Guru Purnima with great enthusiasm. On this auspicious occasion, Principal Dr. S. G. Sapate and Director Mr. Viren Bhirdi felicitated all the faculty members. All the students also enjoyed the celebration and participated enthusiastically in various activities.





Faculty Achievement



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6483769

Grant date: 11 November 2025

Registration date: 04 November 2025

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

MR. PRADIP TUKARAM HASABE, MR. TANMAY PRASAD KULKARNI, MR.

ANISAHMED RIYAZAHMED NADAF

in respect of the application of such design to:

Shock Absorber for Two Wheeler

International Design Classification:

Version: 15-2025

Class: 12 MEANS OF TRANSPORT OR HOISTING

Subclass: 16 PARTS, EQUIPMENT AND ACCESSORIES FOR VEHICLES,
NOT INCLUDED IN OTHER CLASSES OR SUBCLASSES

A handwritten signature in black ink that reads "Adam Williams".

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.



Intellectual Property Office is an operating name of the Patent Office

www.gov.uk/ipo

From our department two faculty members **HoD Mr. A. R. Nadaf** and **Mr. T. P Kulkarni** has officially received the **Certificate of Registration** for a **UK Design**, granted by the Intellectual Property Office, United Kingdom. This prestigious certificate represents international recognition of creative and technical innovation in the field of engineering.

The registered design, titled "**Shock Absorber for Two-Wheeler**", has been successfully approved and documented under the UK Registered Designs Act – a significant milestone demonstrating our commitment to research, design thinking, and applied engineering.

The advanced shock absorber for two-wheeler suspension systems integrates intelligent damping control with adaptive mechanical and electronic subsystems to optimize ride comfort and stability across variable terrains. Utilizing electro-rheological (ER) or magneto-rheological (MR) fluid technology, the damping characteristics are dynamically adjusted in real-time through an embedded microcontroller-based sensor network that monitors parameters such as road surface irregularities, vibration amplitude, and load distribution.

A combination of AI-driven predictive algorithms and IoT connectivity allows the system to learn rider behavior and pre-adjust suspension stiffness to minimize oscillations and enhance cornering performance. Further, energy recovery modules convert mechanical vibration energy into electrical power for onboard systems, improving overall efficiency. The integration of smart materials, nanocomposite coatings, and wear-resistant alloys ensures extended lifespan, reduced maintenance, and superior thermal dissipation, marking a significant leap toward next-generation intelligent suspension technologies for two-wheelers.

Student Achievement

"ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार" - शिक्षणमहर्षी डॉ. बापूजी साळुंखे
SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S

BSiET DR. BAPUJI SALUNKHE INSTITUTE OF
ENGINEERING AND TECHNOLOGY

Heartiest Congratulations

**Proud Moment! Our students continue to shine! 7 selected for
Easa Saleh Al Gurg Group, Dubai with package of ₹ 11.2 Lakh p.a.
Congratulations and best wishes for this global journey!**


Rohan Nitin Rawal

Package
11.2
LPA


Yash Vinod Chandale


Shrushti Vasant Desai


Nida Tabrejkhani Jakate


Harshada Sachin Sutar


Omkar Ankush Patil


Atharv Santosh Shingare

2130, E Ward, Tarabai Park, Kolhapur - 416003 960 760 4242 | 960 760 9292

पुढारी



डॉ. बापूजी साळुंखे इन्स्टिट्यूटच्या विद्यार्थ्यांची दुबईतील कंपनीत निवड

कोल्हापूर : श्री स्वामी विवेकानंद शिक्षण संस्थेच्या डॉ. बापूजी साळुंखे इन्स्टिट्यूट ऑफ इंजिनिअरिंग अँड टेक्नॉलॉजीच्या सात विद्यार्थ्यांची दुबईस्थित 'ईसा सालेह अल गर्ग ग्रुप' या बहुराष्ट्रीय कंपनीत तब्बल ११.२ लाख रुपये वार्षिक पॅकेजसह निवड झाली. ही निवड 'डिप्लोमा इंजिनिअर ट्रेनी' या पदावर दुबई येथे झाली आहे.

निवड झालेल्यांमध्ये हर्षदा सुतार, ओमकार पाटील, निदा जकाते, सृष्टी देसाई, रोहन रावळ, यश चंडाळे आणि अथर्व शिंगारे यांचा समावेश आहे. त्यांनी कॉम्प्युटर टेस्ट आणि

मुलाखतीतून हे यश मिळवले.

संस्था कार्याध्यक्ष प्राचार्य अभयकुमार साळुंखे यांच्या हस्ते या विद्यार्थ्यांचा सन्मान करण्यात आला. संस्थेच्या सचिवा प्राचार्या सौ. शुभांगी गावडे, मुख्य कार्यकारी अधिकारी कौस्तुभ गावडे यांनी अभिनंदन केले. तसेच, व्यावसायिक शिक्षण समूहाचे संचालक प्राचार्य विरेन भिर्डी आणि इन्स्टिट्यूटचे प्राचार्य डॉ. सुहास सपाटे यांनी ट्रेनिंग व प्लेसमेंट विभागाला प्रोत्साहन दिल्याबद्दल विद्यार्थ्यांमध्ये समाधानाचे वातावरण आहे. ट्रेनिंग अँड प्लेसमेंट अधिकारी प्रा. पी. एस. खाडे यांनी मार्गदर्शन केले.

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Scope of Mechanical Engineering

Mechanical engineering, a broad and impactful field, focuses on the design, analysis, manufacturing, and maintenance of mechanical systems, with a scope encompassing diverse industries like automotive, aerospace, manufacturing, and renewable energy.

Core Principles and Applications:

Mechanical engineering applies principles of physics, mathematics, and materials science to analyze, design, and develop mechanical systems.

Industries and Job Roles:

- **Automotive:** Designing and developing vehicles, including engines, suspension systems, and aerodynamics.
- **Aerospace:** Working on aircraft, satellites, and other space-related technologies.
- **Manufacturing:** Designing and optimizing production processes and machinery.
- **Robotics:** Developing and implementing robotic systems for various applications.
- **Renewable Energy:** Designing and developing systems for harnessing renewable energy sources.
- **Thermal Plants:** Designing and maintaining power plants and related systems.
- **Other Industries:** Mechanical engineers are also employed in the defense, railways, and research & development sectors.
- **Specific Job Titles:**
 - Aerospace Engineer
 - Automotive Engineer
 - Mechanical Design Engineer
 - Maintenance Engineer
 - Research and Development Engineer
 - Nuclear Engineer
 - Powertrain Engineer
 - Senior Design Engineer
 - Tool Engineer
- **Skills and Knowledge:**
 - Strong analytical and problem-solving skills.
 - Knowledge of thermodynamics, fluid mechanics, and materials science.
 - Proficiency in CAD/CAM software and other engineering tools.
 - Ability to work in teams and communicate effectively.
- **Future Outlook:**

The field of mechanical engineering is expected to continue growing, with increasing demand for skilled professionals in various industries.

In Government sector

Mechanical engineers in the government sector in India find opportunities in various public sector undertakings (PSUs) and government departments, with roles ranging from research and development to project execution and maintenance, offering good job prospects and competitive salaries.

- **Public Sector Undertakings (PSUs):**
- **Oil & Gas:** ONGC (Oil and Natural Gas Corporation), IOC (Indian Oil Corporation), BPCL (Bharat Petroleum Corporation Limited), HPCL (Hindustan Petroleum Corporation Limited), GAIL (Gas Authority of India Limited).
- **Power:** NTPC (National Thermal Power Corporation), NHPC (National Hydroelectric Power Corporation), BHEL (Bharat Heavy Electricals Limited).
- **Steel:** SAIL (Steel Authority of India).
- **Defense:** DRDO (Defense Research and Development Organization).
- **Space:** ISRO (Indian Space Research Organization), VSSC (Vikram Sarabhai Space Center).
- **Other:** Railways, Heavy Industries, and various state-level departments.
- **Government Departments:**
- **Project Execution:** Working on large-scale infrastructure projects, construction, and industrial development.
- **Research and Development (R&D):** Developing new technologies and improving existing systems in various sectors.
- **Maintenance and Operations:** Ensuring the smooth functioning of machinery and equipment in government facilities and industries.
- **Quality Control:** Ensuring that products and processes meet specific standards and regulations.
- **Job Roles:**
- **Assistant Engineer/Junior Engineer:** Entry-level positions with responsibilities in design, construction, and maintenance.
- **Project Engineer:** Managing the entire project lifecycle, from planning to execution.
- **Research and Development Engineer:** Focusing on innovation and improvement of existing systems.
- **CAD Technician:** Creating technical drawings and plans for products and parts.

How to Get a Government Job:

- **Competitive Examinations:**

Individuals can apply for government job vacancies through competitive examinations conducted by various recruiting agencies such as UPSC (Union Public Service Commission), SSC (Staff Selection Commission), and state-level public service commissions.

- **Engineering Degree:**

A Bachelor of Technology (B.Tech) degree in Mechanical Engineering is generally required for most government jobs.

- **Specialization:**

Some roles may require specialization in areas like thermal engineering, fluid mechanics, or manufacturing.

- **Networking:**

Building connections within the industry and attending job fairs can also help in securing a government job.