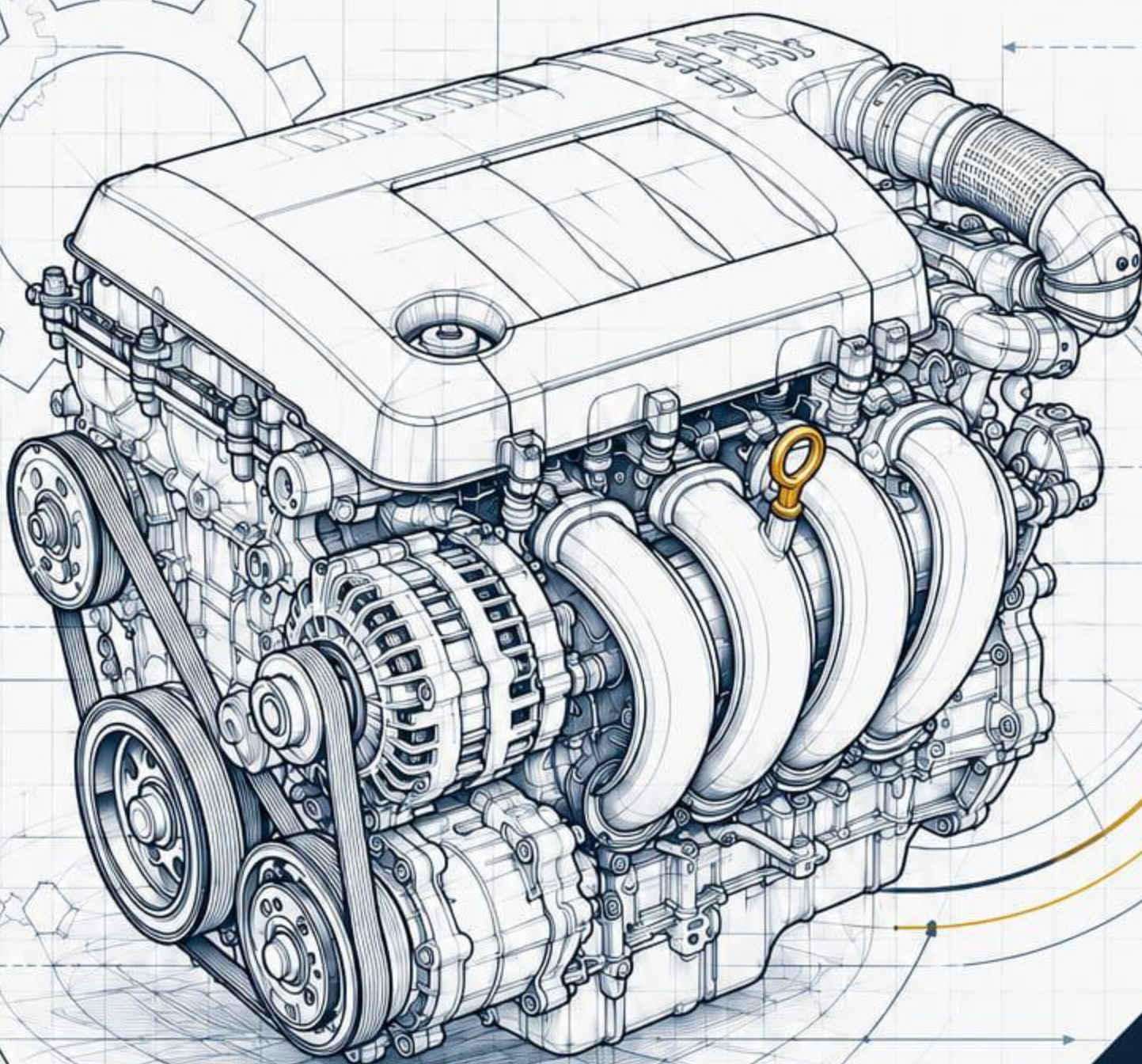


MECHVERSE

A E-NEWS LETTER

Academic Year 2024-25



Department of
Mechanical Engineering

PVG College of Engineering &
S S Damankar Institute of Management, Nashik



NEWS LETTER EDITORIAL TEAM

Sr. No.	Designation	Name of Member
1	HOD	Dr. A R Rasane
2	Chief Editor	Prof. P D Badgujar
3	Co Editor: Student Representative	Mr. Kulkarni Atharva
4	Member	Ms. Joshi Chaitanaya
5	Member	Mr. Kuwar Jay
6	Member	Mr. Pawar Prajwal
7	Member	Ms. Sayyad Tamanna
8	Member	Mr. Nikumbh Piyush
9	Member	Mr. Pagar Yash

DEPARTMENT OF MECHANICAL ENGINEERING**❖ VISION**

- The Mechanical Engineering Department endeavors for providing quality education leading to technically competent engineers to cater the changing industrial demands and societal needs.

❖ MISSION

- To provide state-of-the-art resources to students for imparting quality technical education in Mechanical engineering.
- To develop skilled and employable human resources in Mechanical Engineering to accept the global and societal challenges.
- To prepare competent engineers with the spirit of entrepreneurship and innovation.

❖ PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- *PEO1:* The graduate will have a successful career in mechanical engineering with strong technical, research & professional skills.
- *PEO2:* The graduate will possess an ability to work in diversified fields along with team work and leadership qualities.
- *PEO3:* The graduate will continue to learn and to adapt in a society of constantly evolving technological environment

❖ PROGRAM OUTCOMES (POs)

- *PO1: Engineering Knowledge:* Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop the solution of complex engineering problems.
- *PO2: Problem Analysis:* Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)
- *PO3: Design/Development of Solutions:* Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)
- *PO4: Conduct Investigations of Complex Problems:* Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).
- *PO5: Engineering Tool Usage:* Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)
- *PO6: The Engineer and The World:* Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).
- *PO7: Ethics:* Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)
- *PO8: Individual and Collaborative Team work:* Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.
- *PO9: Communication:* Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make

effective presentations considering cultural, language, and learning differences

- *PO10: Project Management and Finance:* Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.
- *PO11: Life-Long Learning:* Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

❖ **PROGRAM SPECIFIC OUTCOMES (PSOs)**

- *PSO1: SPECIFY, DESIGN and EVALUATE* mechanical components and systems using modelling and analysis software.
- *PSO2: APPLY* knowledge of machines, tools, automation, properties of advanced materials and modern management methods for manufacturing of mechanical components and systems.
- *PSO3: APPLY* core aspects of thermal and fluid engineering to determine the performance of mechanical systems including power absorbing and power generating systems.

❖ **KNOWLEDGE & ATTITUDE PROFILE**

- *WK1: Natural Sciences and Social Science:* A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.
- *WK2: Mathematics and Data Analysis:* Conceptually-based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.
- *WK3: Engineering Fundamentals:* A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.
- *WK4: Engineering Specialist Knowledge:* Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline

- *WK5: Engineering Design and Environmental Considerations:* Knowledge, including efficient resource use, environmental impacts, whole-life cost, re-use of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.
- *WK6: Engineering Practice (Technology):* Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.
- *WK7: Role of Engineering in Society:* Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.
- *WK8: Research and Critical Thinking:* Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.
- *WK9: Ethics and Inclusive Behavior:* Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability, etc., with mutual respect.

HOD's MESSAGE

Mechanical Engineering is a well-established Core Branch (PVGCOE & SSDIOM, Nashik Sanctioned Intake: 60 Branch code: 533061210). Basic domains like Design Engineering, Thermal Engineering, Production and Industrial Engineering, CAD/CAM/CAE, Mechatronics etc., fall under it. Mechanical Engineers could work in Private or Public sector industries of various types. Mechanical Engineers can seek employment in Government Departments like Posts and Telegraphs, Defense, PWD, and CPWD. Engineering department's viz. Aeronautical, Agricultural, Automobile, Chemical Factories, Power Plants and the Railways need Mechanical Engineers for the design, manufacturing and maintenance of their products, Plants and Machinery. Mechanical Engineers are highly sought after in automobile, chemical, electronics, steel plants, oil exploration and refining, technical wings of armed forces, space research organization, etc.

Prof. Dr. Amol R. Rasane
(Head of Department)

Events & Celebrations Organized by MESA

Event: Career Guidance On CNC/VMC Machine and Awareness about World Skills Up Competition



Event: National PM Vishwakarma Programme



Event: Celebration of World IPR Day



Event: Career Guidance and Awareness of Skills Up ProgramEvent: Diwali Gifts and Sweet Distribution EventEvent: Literacy Day

Event: Techers Day CelebrationEvent: SAE INDIA Tiffan Competition

Event: Parents Meet

Event: Startup DayEvent: Fresher's Welcome Celebration

Result Analysis

❖ Pride Toppers for the Academic Year 2023-24

Class	Rank	Name of Student	SGPA
TE	1	Patil Aparna S.	9.66
	2	Waghchaure Yuraj G	7.00
BE	1	Deshpande Shripad N	8.57

Internship Summary

Sr. No.	Industry Name	Specialization	No. of Students	Duration	
				To	From
1	Access CAD	Software training on CREO	17	29/12/2024	15/01/2025

Placement Details

Sr. No.	Name of Student	Employer Name	CTC(In lac per annum)
1	Patil Aparna Sandip	Mahindra & Mahindra Ltd.	4.2
2	Bhalerao Satyam Sanjay	Konark global, Nashik	2.2



Workshop/Seminar/Value Added Course:

Sr. No.	Course Name	Activity
1.	Infosys Springboard	Students completed Infosys Springboard Certification for different courses.
2.	Infosys Springboard	TE Mechanical students successfully completed certification for “Entrepreneurship” course under Audit Course through Infosys Springboard
3.	NPTEL Course	BE Mechanical students successfully completed certification for “Stress Management” course under Audit Course
4.	Expert Talk/Guest Lecture	An expert talk arranged under “Electrical and Electronics Engineering” subject for SE Mechanical Students. Prof. Chandrakant R. Shinde delivered a lecture under EEE subject.

Utilization of Virtual Lab:

Class	Topic Covered in Virtual Lab
SE	Rockwell/Brinell Hardness Testing Machine
TE	1.Arithmetic Operation, 2.Built in Function
SE	1.Oldham coupling, 2. A quick Return Mechanism
SE	1.Reynolds Experiment, 2.Bernoullis Experiment
TE	1.Simulation of Anatomy of 3D Printer 2. Simulation of Cartesian 3D Printer Machine

Industrial Visits

Sr. No.	Subject	Name of Industry	Class
1	Engineering Thermodynamics	Kadwa Sugar Factory	SE
2	Engineering Material and Metallurgy	Meta forge Engineering Pvt.ltd	SE

3	Geometric Dimensioning and Tolerancing Lab	Meta forge Engineering Pvt.ltd	SE
4	Skill Development	Kadwa Sugar Factory	TE
5	Digital Manufacturing Laboratory	Technocad	TE
6	Mechatronics	Elite Technology Pvt.Ltd	TE
7	Dynamics of Machinery	Baba Tyre	BE
8	Turbomachinery	Nilgiri Pump Station	BE
9	Turbomachinery	Kadwa Sugar Factory	BE
10	Applied Thermodynamics	Shareen Auto Pvt Ltd, Satpur Nashik	SE
11	Machine Shop	Precise Engineering Company, Ambad	SE
12	Machine Shop	Patil Engineering and Gear, Satpur	SE
13	Kinematics of Machinery	Shareen Auto Pvt Ltd, Satpur	SE
14	Fluid Power & Control Lab	Shareen Auto Pvt Ltd, Satpur	TE
15	Measurement Lab	Deccan Engineering	TE

Staff Achievements

Sr No	Name of Staff	Title of the Event	Category
1	Dr. Amol R. Rasane	Science Communication: Research Productivity & Data Analytics using Open-Source Software	FDP-NPTEL
2		E-waste awareness & collection drive	Awareness drive
3		AI For Everyone	Training
4		Design Thinking - A Primer	FDP
5		Creating IP led academic spinoff	Webinar
6		IPR Career Summit 2024	Conference
7	Dr. Shivaji V. Gawali	AI and Simulation in Additive Manufacturing	FDP
8		Entrepreneurship Awareness Camp	Training
9		AI Tools for Educators	FDP
10		Entrepreneurship Awareness Program	Training

11	Prof. Vaibhav C. Chopade	Syllabus Implementation workshop on "Engineering Graphics-2024 Course	Workshop
12		Role of Natural Fibres in Sustainable Development	FDP
13		Innovation and Entrepreneurship Ecosystem Development in Higher Education Institutions	Workshop
14		AI Tools for Educators	FDP
15		Research Paper Writing and Publishing in a high-impact-factor journal	STTP
16	Prof. Yogita U. Medhane	"Revolutionizing Vibration Analysis through Artificial Intelligence and Machine Learning Integration"	FDP
17		Research Methodology	FDP
18		Research Methodology	FDP
19		AI Tools for Educators	FDP
20	Prof. Pankaj D. Wadile	Best Techno-savvy Award	Award
21		Innovation and Entrepreneurship Ecosystem Development in Higher Education Institutions	FDP
22		Ansys Discovery- Design Smarter & Simulate Faster	Webinar
23		Simulation and Analysis of Mechanical Systems using Ansys and CFD	FDP
24		Tifan 2025 Technical Workshop	Workshop
25		AI Tools for Educators	FDP
26	Prof. Paresh D. Badgujar	Teacher Excellence	Award
27		EG Syllabus Implementation	Workshop
28		Ansys Discovery- Design Smarter & Simulate Faster	Webinar
29		AI Tools for Educators	FDP
30	Prof. Anil D. Mandlik	Advances in Engineering Technology	FDP
31		Turnip Innovation	Conference
32		Entrepreneurship Awareness Camp	Training
33		EG Syllabus Implementation	Workshop

34	Prof. Santosh S. Sarode	Emerging Concept in HVAC&R	FDP
35		AI Tools for Educators	FDP
36		Advances in Engineering Technology	FDP
37		Entrepreneurship Awareness Camp	Training
38	Prof. Sudhir S. Shardul	AI Tools for Educators	FDP
39		"Innovative Teaching Pedagogy & Skills Component of NEP"	FDP
40		Manufacturing Technique for Novel Material	FDP
41		AI Tools for Educators	FDP
42	Prof. Santosh K. Chandole	Emerging concept in Heating, Ventilation, Air-Conditioning & Refrigeration	FDP
43		Excellence in Research Methodology	Workshop
44		Engineering Graphics-2024 course	Workshop
45		Entrepreneurship Awareness Camp	Workshop
46		AI Tools for Educators	FDP

Students Achievement

Sr. No.	Name of Student	Name of Award	International / National / Zonal
1	Mandlik Prasad S.	NPTEL Certification (Elite)	National
2	Patil Aparna S.	Social Star Award (TIFANSAE India)	National
3	Joshi Chaitanya H		National
4	Ghuge Rutika S.		National
5	Bhandarkar Mrunal M.		National
6	Bhandarkar Mrunal M.	TIFAN SAE India - Participation	National
7	Patil Aparna S.		National
8	Pillai Sujai	Infosys springboard (Introduction to AI)	National
9	Sanap Harshal S.	Offline Technical Training by Talent Battel Pvt Ltd	National
10	Thakare Chetan G.		National
11	Joshi Chaitanya S.		National

12	Pawar Prajwal S.		National
13	Wagh Omkar A.		National
14	Madhwai Ashish S.		National
15	Malpure Niranjana P.		National
16	Mandale Gitanjali S.		National
17	Kokate Pratik S.		National
18	Pawar Bhushan K.		National
19	Kurkute Giridhar C.		National
20	Tirole Atul V		National
21	Raut Santosh V.		National
22	Rokade Kartik D.		National
23	Ghuge Ritika S.		National
24	Mahajan Gita D.		National
25	Dhonnar Bhushan J.		National
26	Bhalerao Indrajit P.		National
27	Mahajan Gita D.	Attended Entrepreneurship Awareness Camp	Zonal
28	Pawar Prajwal S.	Runner-up in Project Exhibition-GAGNANT 2025	Zonal
29	Kokate Pratik S.		Zonal
30	Malpure Niranjana P.		Zonal
31	Madhwai Ashish S.		Zonal
32	Patil Aparna S.	Student of the Year 2K25	Cultural
33	Patil Aparna S.	University Representative in Annual Social Gathering 2025	Cultural
34	Patil Vaishnavi Y.	TIFAN-2025 Participation, Workshop on “Multi-Vegetable Planter design & hands-on” at Sanjivani COE Kopergaon.	Zonal
35	Sayyad Tamanna J.		
36	Pawar Apurva S.		
37	Pandav Pranjal S.		
38	Patil Aparna S.		
39	Paithane Dhanashri S.		
40	Jore Girish R.		

41	Joshi Chaitanya H.		
42	Kuwar Jay A.		
43	Kulkarni Atharva S.		
44	Mandale Gitanjali S.		
45	Kulkarni Atharva	Explore Engg. Job Simulation, by GE Aerospace	National
46	Kulkarni Atharva	E- Learning on Self-Charged Hybrid Electric Vehicle by ASDC	National

Sr. No.	Name of the Student	Name of the Event	State /National/ International level	Name of the award if any
1	Dhanashree Shrikant Paithane	Kirloskar Vasundhara Green-College Clean-College Competition	National	1st place in Nashik Division GCCC
2	Atharv Santosh Kulkarni			
3	Dhanashree Shrikant Paithane	Kirloskar Vasundhara GCCC Super Finale Competition (GCCC: Green College Clean College/Campus)	National	3rd place in National level GCCC
4	Patil Aparna S.	TIFAN SAE India	National	Social Star Award
5	Joshi Chaitanya H.			
6	Vishal Jore			
7	Ghuge Rutika S.			
8	Bhandharkar Mrunal M.	GAGNANT 2025 - Project Competition	Zonal	Runner Up
9	Pawar Prajwal S.			
10	Kokate Pratik S.			
11	Malpure Niranjana P.			
12	Madhawai Ashish S.	MET-TECH 24: Mini Project Competition	Zonal	Consolation Prize
13	Pratik Sandip Kokate			
14	Chetan Gopinath Thakare	MET-TECH 24: Mini Project Competition	Zonal	Special Award
15	Aparna Sandip Patil	MET-TECH 24: Project Competition	Zonal	Consolation Prize
16	Chaitanya Hemant Joshi	MET-TECH 24: Mini	Zonal	3rd Prize

		Project Competition		
17	Geeta Dinesh Mahajan	Industry Trainning - Code without Barrier trainning by Microsoft		Course Completion certificate
18	Rutika Sahebrao Ghuge	Industry Trainning - Code without Barrier trainning by Microsoft		Course Completion certificate
19	Vishal Jore	LOGMIEER Techfest 2k25 - Mechanical Project Competition	State	Participated

Research papers published in Journals

Title of paper	Name of the author/s	Name of journal	Year of publication
Determination of an optimum patch configuration in the repair of a center crack in thin aluminum sheet using polymer composite patch	Amol Rasane, Prashant Kumar, Mohan Khond	Polymer composite - Wiley	2024
Finite element analysis of failure at the aluminium-carbon fiber composite	Amol Rasane, Prashant Kumar and Mohan Khond	International Journal of Advanced Technology and Engineering Exploration	2024
An Extensive Study of Metal Matrix Composites and their Various Properties for Different Uses	Satypal Warghat, Chetankumar Sedani, Amol Rasane, Kamalkishor Maniyar, Vishakha Dhanwate, Sachin P. Jadhav, Swapnil Deshmukh, Jagannath Gawande and Ramdas Biradar	Journal of Mines, Metals and Fuels,	2024

Workshops/Training conducted by industry experts in

Academic Year 2024-25

Sr. No.	Date	Organization	Expert	Topic
1	08/06/25 to 22/06/2025	ARK Info solution Private limited	Mr. Rohit Sangwan and Mr. Chetan Patil	ANSYS CFD Training Program
2	20th June 2025 – 28th June 2025	CADCAM Guru	Mr. Amit Joshi	09Day CATIA Training Program
3	19-07-2024	CADMAX Institute Nashik	Mr. Mahesh Chalke	Career guidance Seminar on CNC/VMC Machine
4	21-10-2024	SIEM Nashik	Prof. Chandrakant R. Shinde	Expert Lecture on Electrical and Electronics Engineering
5	12-02-2025	CAD/CAM Guru Institute	Mr. Praful Kothe	Career Guidance on Mechanical Software and Industry.
6	13-02-2025	CAD/CAM Guru Institute	Mr. Shrikant Bidwai	Career Guidance on Digital Design and Simulation, CAD/CAM Software and Industry Trends.
7	18-03-2025	MET Nashik, Dept of Automation and Robotics	Prof. Vishnu Kale	Development of Machine Learning Model
8	26-04-2025	MVP Samaj Law College	Mrs. Charushila Khairnar	Celebration world IPR day
9	16-01-2025	IGTR Aurangabad	Mr. Prashant Chaudhary	Entrepreneurship Awareness Program

About PVG...



Pune Vidyarthi Griha's College of Engineering & Shrikrushna S. Dhamankar Institute of Management (PVGCOE & SSDIOM), Nashik, established in **2010**, is committed to providing quality professional education to deserving students. Affiliated with **Savitribai Phule Pune University**, approved by **AICTE** and **DTE Maharashtra**, and accredited by **NAAC**, the institute offers undergraduate engineering programs in Mechanical, Computer, IT, E&TC, and AI & Data Science, along with a two-year full-time MBA program offering specializations in Finance, Marketing, Human Resource, Operations & Supply Chain Management, and Business Analytics.

Spread across a **20-acre campus** in Mhasrul, Nashik, the institute provides modern infrastructure, ICT-enabled classrooms, well-equipped laboratories, a central library, sports, and cultural facilities. Backed by the **100+ year legacy** of Pune Vidyarthi Griha, the institute emphasizes academic excellence, industry interaction, research, internships, mentoring, and holistic student development, producing successful professionals, entrepreneurs, and higher education aspirants.



**Pune Vidyarthi Griha's
College of Engineering & Shrikrushna S.
Dhamankar Institute of Management, Nashik**
Approved by AICTE & DTE, Affiliated to Savitribai Phule Pune University, Pune



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