



“विद्या राष्ट्रस्य प्रतिष्ठा”

Sakeshwar Gramin Vikas Seva Sanstha's

ADSUL'S TECHNICAL CAMPUS



Approved by AICTE New Delhi | Recognized By Government of Maharashtra DTE
and Affiliated to SPPU, Pune

Accredited by NAAC with B++, ISO 9001:2015 Certified

DTE CODE:5380

MECHO INVENTION

MECHANICAL ENGINEERING DEPARTMENT MAGAZINE



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INNOVATE

Exploring ideas
that drive
tomorrow



DESIGN

Engineering
solutions for
real world



DEVELOP

Building beyond
boundaries



ACHIEVE

Recognizing
excellence in
every step

“The best way to
predict the future
is to **INVENT IT.**”



About Trust

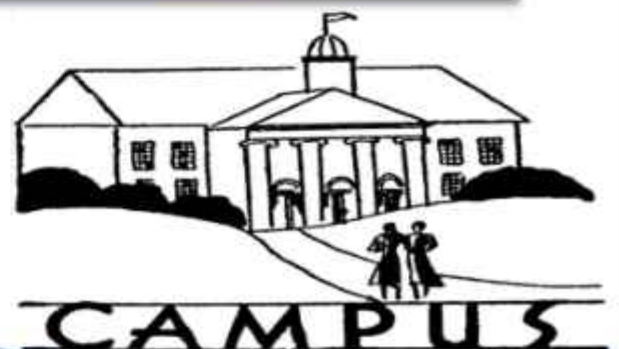
Sakeshwar Gramin Vikas Seva Sanstha established on 24th September 2004 to promote the noble cause of education. The founder member & president of this sanstha is Hon. Prof. Anirudha Manik Adsul. Prof. Anirudha Adsul Sir is well known personality all over Maharashtra in Education field. The work in the field of education which is started 25 year ago under the name of Adsul's classes for 11 and 12th Science students has today been transformed into Adsul's Technical campus (Engineering and MBA) College, and B.Ed. college under the Sakeshwar Gramin Vikas Seva Sanstha. Today 1500+ students from rural areas are studying in in the institute and thousands of pass out students are contributing to the progressive development of country.



About Adsul's Technical Campus (ATC)

Sakeshwar Gramin Vikas Seva Sanstha Sakeshwar Gramin Vikas Seva Sanstha established on 24th September, 2004 by visionary educationist Prof. Anirudha Manik Adsul with the aim to develop competent, committed and compassionate leaders who will make a difference to the people among whom they work. Sanstha constantly scans the developments in business and in society and tries proactively to meet the challenges.

The founder president of the Sanstha is well known personality all over Maharashtra in the Education field. His work in the field of education started 25 years ago under the name of Adsul's Classes for 11th and 12th Science students has today been transformed into Adsul's Technical campus; Engineering, MBA, Polytechnic, Pharmacy, Arts, Commerce, Science, BBA, BCA, BMS and B. Ed colleges under the landmark of Savitribai Phule Pune University, Pune.



Editorial Board

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Principal's Desk

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Chairman's Desk



It is my pleasure to introduce one of the best technological Institutes of Maharashtra, Adsul's Group of Institutions, established in 2011. At present Adsul's Technical Campus Campus, Ahmednagar is offering undergraduate program (B.E) and Post graduate program (M.B.A). The institute has state-of-art laboratories, in each department.

Qualified and Experienced faculties are with us and they work together to access the newest trends in learning so as to impart quality education to our students. Our students gain skills that prepare them to assume leadership role in the engineering fields. Apart from academic activities co-curricular activities sports, adventure, cultural and social-service activities from important parts of life of the student.

This importance is well indicated in the spread of facilities at the Adsul's campus. All undergraduate, postgraduates students reside on the campus and thereby get full opportunity to participate in co-curricular and extra-curricular activities leading to a holistic personality development. With all the faculty members also residing on the campus, there is a unique, close and family – like relationship between students and teachers. I wish the Institute all the success.

Prof. Anirudha M. Adsul
Chairman
Sakeshwar Gramin Vikas Seva

Principal's Desk



I welcome you all to the Adsul's Group of Institutions, established in 2011. At present Adsul's Technical Campus, Ahmednagar is offering undergraduate program (B.E) and Post graduate program (M.B.A). The institute has state-of-art laboratories, in each department.

We have blend of Discipline along with care and support to our students. We believe that everybody has good potential which can be blossom if proper nourishment and training is given.

Hence apart from normal teaching curriculum we arrange Industrial visit and encourage our students to do internship and field projects.

We do arrange lectures on soft skill, personality development, and interview techniques etc. which will not only enhance their personality but also imbibe human values in them. Authorities here are easily approachable which makes difference in sorting out your difficulties and making learning a joyful experience.

DR. PRADEEP. M. PATIL
PRINCIPAL
SGVSS ADSUL'S
TECHNICAL CAMPUS

HOD MESSAGE



It gives me immense pleasure to extend my greetings through this magazine, which serves as a vibrant platform to showcase the creativity, technical knowledge, and achievements of our students and faculty. Mechanical Engineering, often called the mother of engineering, continues to play a pivotal role in shaping industries and driving innovation across the globe.

At our department, we strive to blend strong fundamentals with modern advancements, ensuring our students are well-prepared for the challenges of the future. With dedicated faculty, state-of-the-art laboratories, and a culture of research and innovation, we nurture talent that contributes not only to academic excellence but also to societal progress.

I encourage our students to actively participate in projects, internships, and interdisciplinary activities, as these experiences build confidence and broaden perspectives. The magazine reflects this spirit of exploration and collaboration, highlighting the diverse accomplishments of our community.

DR. GITAY M. J.
HOD
MECHANICAL DEPARTMENT



Vision

“To be a premier department in Mechanical engineering to serve the needs of industry and society”

Mission

M1: To provide state-of-the-art facilities to impart quality education.

M2: To undertake various value-added and add-on courses to make students technically sound and thorough professionals.

M3: To collaborate with the industries and strive to instill the research and problem-solving attitude amongst students and faculty.

M4: To inculcate high moral, ethical values, and spirit of national Pride amongst students and faculty.



Sr. No.	Faculty Name	Designation
1	Dr. Gitay M.J.	HOD
2	Dr. Patil N.Y.	Professor
3	Dr. Kaware K.R.	Professor
4	Dr. Kurpatwar B.P.	Associate Professor
5	Dr. Shaikh J.S.	Associate Professor
6	Dr. Gite A.J.	Associate Professor
7	Dr. Vasava A.S.	Associate Professor
8	Dr. Pawar N.N.	Associate Professor
9	Gadakh R.S.	Assistant Professor
10	Jagtap K.K.	Assistant Professor
11	Gunjal N.L.	Assistant Professor
12	Nagargoje U.S.	Assistant Professor
13	Jaware A.R	Assistant Professor
14	Berad S.T.	Assistant Professor
15	Ghule A.P.	Assistant Professor
16	Chavan Y.S.	Assistant Professor
17	Gaikwad S.A.	Assistant Professor
18	Shinde S.V.	Assistant Professor
19	Athawale N.V.	Assistant Professor
20	Tayade D.R	Assistant Professor
21	Patil M.P	Assistant Professor
22	Waghmare A.B.	Assistant Professor
23	Katore S.S.	Assistant Professor

Academic Toppers



Second Year Toppers



Archana Autude



Maind Surendra



Rohit Tanpure

Third Year Toppers



Shaikh Sadiya



Swami Siddhaling



Karpe Sakshi

Final Year Toppers



Chaware Abhishek



Karnawat Rohit



Mayur Thombare

Staff Achievement

Prof. Jaware A.R.

- ✓ A paper on —Development of enhanced fire suppression & live surveillance robot: Lora Flame-Guard by Prof. Jaware A.R. A. published in international Research journal, IJARST, Vol. 4 Issue 6th April 2024.
- ✓ A paper on —The Tribological Properties of PTFE Composites Filled with Carbon Fiber, MOS, Bronze Reinforcement, by Prof. Jaware A.R. A. published in international Research journal, IJARST, Vol. 4 Issue 6th May 2024.
- ✓ A paper on —Development of Automatic Solar Tracking System, by Prof. Jaware A.R. A. published in international Research journal, IJARST, Vol. 4 Issue 4th May 2024.

Patent Certificate:-

- ✓ A Patent Published on —**SMART VOICE ASSISTED LEARNING DEVICE FOR VISUALLY IMPAIRED** by Prof. Jaware A.R. A. Published in The Patent Office, Government of India, Serial No:- 173704, Design No:- 416022-001 on Date :- 06/05/2024.

Patent Certificate:-

- ✓ A Patent Published on —**AI BASED SUNGLASSES FOR VISUAL IMPAIRED** by Prof. Jaware A.R. A. Published in The Patent Office, Government of India, Design No:- 6330071 on Date :- 11/12/2023.

Prof. Nagargoje U.S.

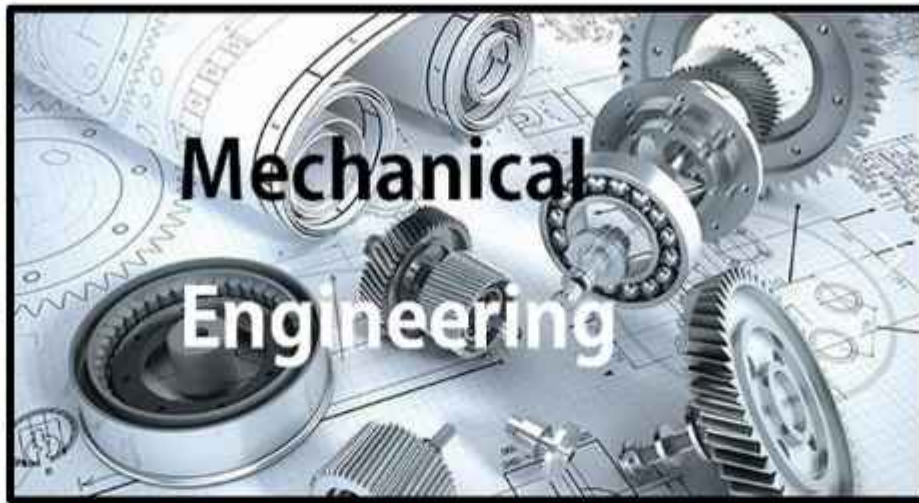
- ✓ Attended FDP on Geometric Dimensioning & Tolerances
- ✓ Attended FDP on Research Opportunities In Vibration Engineering-2023
- ✓ Attended FDP on Recent Advancement In Material, Micro-Manufacturing and Characterization (Rammc-23).
- ✓ Attended FDP on Recent Advances And Challenges In Electric Vehicle.
- ✓ Attended FDP on Recent Advances In Mechanical Engineering (Rame-25).

Prof. Gaikwad S.A

- ✓ A paper on "Electricity Generation by Using Waste" by Prof. Gaikwad Snehal A. published in international Research journal, IRJMETs Vol. 6 Issue 6th May 2024.
- ✓ Attended STTP on "Computational Fluid Dynamics: Birding Theory and Practice".
- ✓ Attended FDP on "Dassault Systems Solid Works"
- ✓ Attended FDP on Modeling and Simulation of Electric Vehicle
- ✓ Attended FDP on "Additive Manufacturing Technology"
- ✓ Attended 07th National Workshop on "RECENT TRENDS IN INDUSTRIAL ENGINEERING (RTIE)"
- ✓ Attended FDP on "Innovative Practices in Teaching Learning Practices"

Prof. Athwale N.V.

- ✓ Design & Development of Magnetic transmission system in IJARST, Volume 04, issue 06, May 2024.
- ✓ Development of solar operated wireless Electric vehicle charging system in IJARST, Volume 04, issue 05, May 2024



Mechanical engineers are the foundation of numerous sectors, from creating effective transportation systems to developing cutting-edge robotics and renewable energy technologies.

Developments in the Field of Mechanical Engineering, Rapid technological growth has led to considerable improvements in the field of mechanical engineering in recent years. Mechanical engineers are contributing in the following important areas: 1. Systems of Sustainable Energy

Mechanical engineers now have more options thanks to the movement toward renewable energy sources like solar and wind. They create eco-friendly and efficient energy storage systems, optimize solar panels, and design turbines.

Applications in the Real World -

Everyday life demonstrates the use of mechanical engineering concepts. Mechanical engineers are essential to the development of automobiles, aircraft, HVAC systems, and even household goods. The discipline's reach is being further extended by developing fields like biomechanical engineering, which are producing cutting-edge medical gadgets and prosthetic limbs.

Opportunities and Difficulties Despite its enormous promise, the field is not without difficulties. Among the urgent challenges are the needs to handle global energy demands, manage resources responsibly, and lower carbon footprints. But these difficulties also offer chances for creativity and industry leadership.

INTERNAL COMBUSTION ENGINE

The internal combustion engine (ICE) is a marvel of engineering that has revolutionized transportation, power generation, and various industries. Its invention and evolution have been pivotal in shaping modern society. This article explores the working principles, components, and types of internal combustion engines, along with their applications and future prospects.

What is an Internal Combustion Engine?

An internal combustion engine is a heat engine where the combustion of a fuel-air mixture occurs within a confined space called a combustion chamber. The high-pressure gases generated from this combustion exert force on engine components, such as pistons, to produce mechanical work.

Key Components of an Internal Combustion Engine

1. **Cylinder:** The chamber where fuel combustion takes place.
2. **Piston:** A movable component within the cylinder that transfers the force from expanding gases to the crankshaft.
3. **Crankshaft:** Converts the linear motion of the piston into rotational motion.
4. **Connecting Rod:** Links the piston to the crankshaft.
5. **Valves:** Control the intake of air-fuel mixture and exhaust of combustion gases.
6. **Spark Plug:** Initiates combustion in petrol engines.
7. **Fuel Injector:** Delivers fuel into the combustion chamber in modern engines.
8. **Flywheel:** Maintains engine momentum and ensures smooth operation.

Types of Internal Combustion Engines

1. **Based on the Type of Fuel:**
 - *Petrol Engine:* Uses gasoline as fuel and relies on spark ignition.
 - *Diesel Engine:* Uses diesel fuel and operates on compression ignition.
2. **Based on the Number of Strokes:**
 - *Two-Stroke Engine:* Completes a power cycle in two strokes of the piston.
 - *Four-Stroke Engine:* Completes a power cycle in four strokes, involving intake, compression, power, and exhaust strokes.
3. **Based on the Configuration:**
 - *Inline Engine:* Cylinders are arranged in a single line.
 - *V Engine:* Cylinders are arranged in a V-shaped configuration.
 - *Flat Engine:* Cylinders are arranged horizontally opposite each other.

Students Activity



Poster Competition on the occasion on Engineer's Day

Chhtrapatil Shivaji Maharaj Jayanthi



Ganpati Celebrations

Sports Activity



TECHNOSTAV

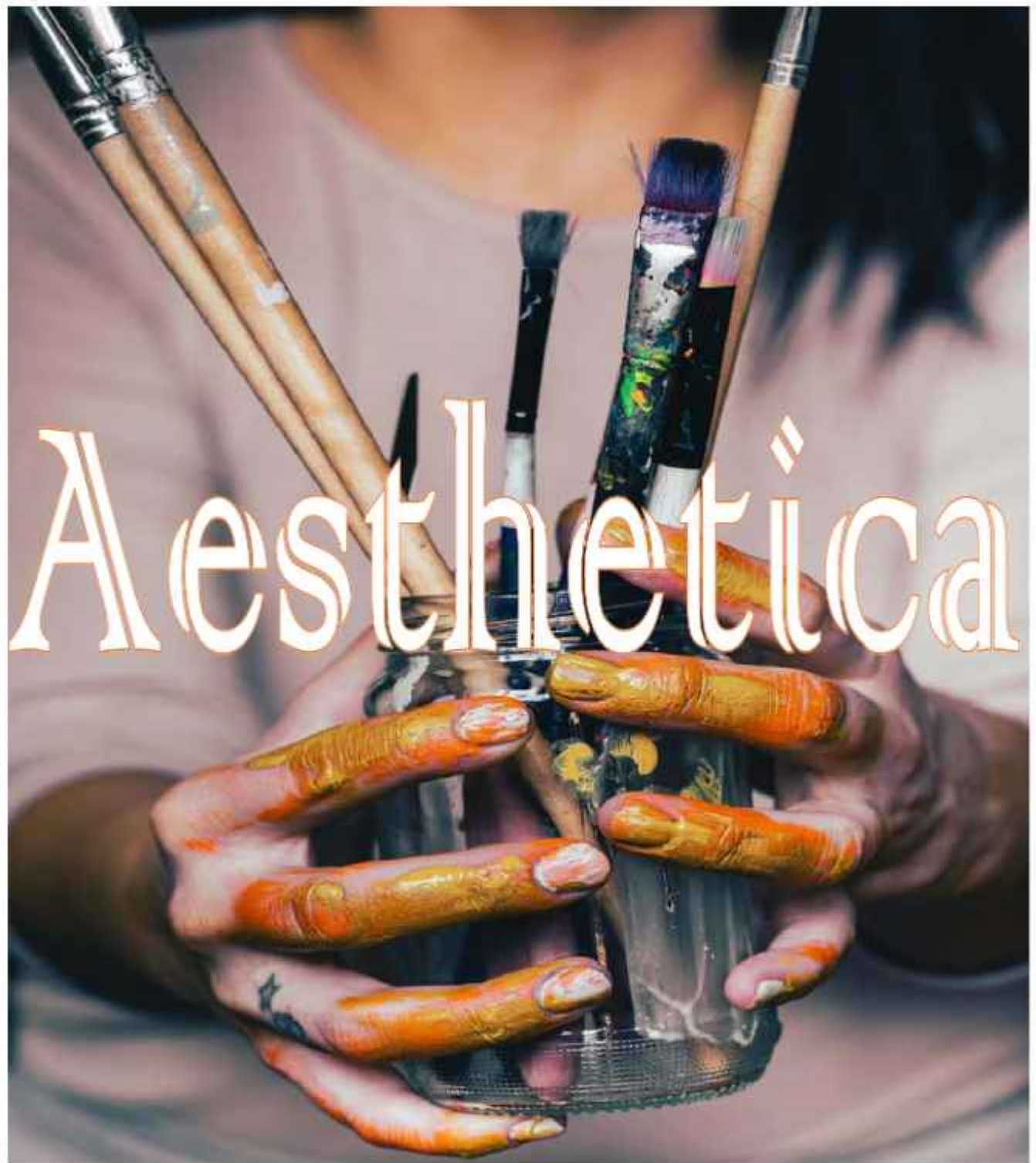


Best Mechanical Engineer



In class he greets us with a smile,
Explaining concepts all the while.
With models spinning in his hands,
He helps us learn how power stands.
Formulas tough, he makes them light,
We say, "He's always got it right!"
From metal gears to systems wide,
He walks us through each step with pride.
We think, we build, we persevere,
Because his guidance keeps us near.
To us he's mentor, friend, and seer
Truly the top mechanical engineer!

... Supekar Shivam



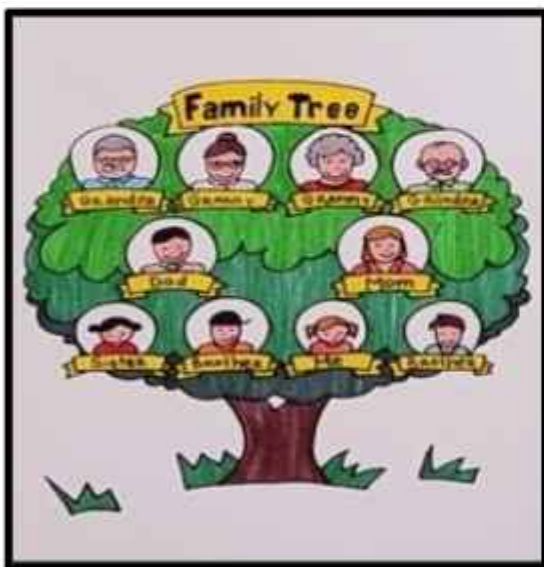
Aesthetica



WAGH VIKAS TRIMBAK
SE Mechanical Engg



PAWAR BHUVANESH DILI
SE Mechanical Engg



AUTADE ARCHANA SHRIRA
SE Mechanical Engg



KUTE SHUBHAM MARUTI
SE Mechanical Engg



DHAMANE AKSHAY SURESH
BE Mechanicalcal Engg



NIMSE ROHAN SATISH
TE Mechanical Engg

WAGHMARE PRIYANKA B.
TE Mechanical Engg.



Photography Club



PATHAN ALBAKSH ABDUL
TE Mechanical Engg



SHELKE KUNAL RAJENDRA
TE Mechanical Engg



PUNDE SANKET SANJAY
TE Mechanical Engg

Quotes:

Night taught me how to feel your
pain, and dawn taught me how to carry
your hope. You're not walking this
world by yourself—

light and dark both chose you.
And when the sun forgets to shine on your
days... I won't forget you. I'll be there,
even in the quiet.

SHENDKAR PRITI MAHESH

TE Mechanical Engg.

Starting out, I doubted every line,
thinking my writing was nothing but nonsense to others.

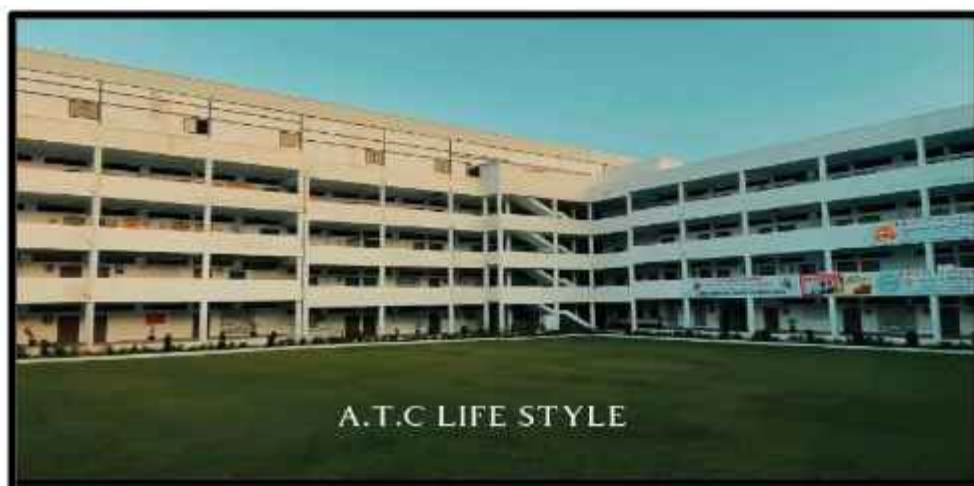
But then I understood—
people praise, people judge, people
talk... that's just what people do.
Let them spend their breath however they want.

Because I won't
stop, I won't
pause,
I won't let another soul decide the worth of my words.

GITE SHRIKANT RAKHAMAJI

BE Mechanical Engg.





Traditional Events



—Small steps toward a cleaner tomorrow.



'Ganpati Bappa Morya!' *May your life be filled with wisdom as sweet as modaks, Celebrating Ganpati Festival.*



Chhatrapati Shivaji Maharaj Jayanti

Birth anniversary of a warrior whose vision created a strong and united nation.

The Dynamics of Us

My brilliant engineer, you calculate the sparks,
Life's just equations and neatly boxed charts.
A kiss is a vector with angle and force,
While my heart goes full throttle, no plotted course.

You speak in vibrations, in damping and heat,
While my pulse redlines every time that we meet.
Your hands are precision, calibrated and clean,
Mine are runaway systems, delightfully obscene.

You model my laughter as harmonic decay,
I explode like resonance shaking the frame.
You ask for conditions, constraints, and a plan.
I leap past the limits: *nonlinear*, I am.

Your emotions, you say, need factors of safety.
I overload gladly catastrophic and crazy.
You trace every problem to friction or wear,
While I burn like ignition: uncontrolled, unfair.

I call you my engine, my power supply,
You check fuel efficiency, mumble standby.
Yet when worlds misalign and systems go wrong,
I'm the surge that reminds you where motion belongs.

So measure me, map me, define what you see, But
love's not a problem you're solving, you'll find, It's
the force that ignores every boundary line
And drags even engineers gloriously.

Savale Aishwarya

THE STRUGGLE GOES

The struggle goes on
Even when my legs shake
Even when the road dissolves
beneath my feet

I run toward faces that never turn
My screams dissolve into the air
Every effort—
carried away like dust in the rain

I stand alone, again
Surrounded by my thoughts
Wanting to play them out loud
Wanting my words to matter

But they fall unheard
Heavy
Meaningless to you

I gather my focus
I rise with borrowed strength
Not knowing you've already
Closed your mind against me

I absorb every sound
Every clash of noise
Trying to find my melody
Within the chaos

I see it now—
This battle is mine alone
And still, I stay



I am brave enough to feel the burn
To carry emotions like fire
To shine light into the dark
Even as you tear it apart
And watch it fade from your eyes.

Yet I hold on
To hope
To thin rays of belief.

I know the road is long
But I keep walking.

You silence me
When I try to find the rhythm
So I write it instead.

I paint my world with words
Wear my scars like armor
Turn pain into something beautiful.

And one day-
I will speak
Out loud
In my own voice

Prof. Ashwini Waghmare
Mechanical Engg.

