



GOLDEN VALLEY EDUCATIONAL TRUST  
ಡಾ||. ಟಿ. ತಿಮ್ಮಯ್ಯ ತಾಂತ್ರಿಕ ಪಹಾವಿದ್ಯಾಲಯ

**Dr. T. THIMMAIAH  
INSTITUTE OF TECHNOLOGY**

Oorgaum, KGF - 563 120 | [www.drstit.edu.in](http://www.drstit.edu.in)

# DEPARTMENT OF MECHANICAL ENGINEERING

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**DR.T.THIMMAIAH INSTITUTE**  
OORGAUM, KOLAR GOLD FIELD

**Yantrik Avinya's  
MAGAZINE**

## ABOUT THE DEPARTMENT

Mechanical Engineering is a discipline of engineering that applies the principles of physics and materials science for analysis, design, manufacturing, and maintenance of mechanical systems. It is the branch of engineering that involves the production and usage of heat and mechanical power for the design, production, and operation of machines and tools. It is one of the oldest and broadest engineering disciplines.

The engineering field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, materials science, and structural analysis. Mechanical engineers use these core principles along with tools like computer-aided engineering and product life-cycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, watercraft, robotics, medical devices and more.

Mechanical Engineering emerged as a field during the industrial revolution in Europe in the 18th century; however, its development can be traced back several thousand years around the world. Mechanical engineering science emerged in the 19th century as a result of developments in the field of physics. The field has continually evolved to incorporate advancements in technology, and mechanical engineers today are pursuing developments in such fields as composites, mechatronics, and nanotechnology. Mechanical Engineering overlaps with aerospace engineering, civil engineering, electrical engineering, petroleum engineering, and chemical engineering to varying amounts.

### *President's Message*

Dear Students, Faculty and Readers,

It gives me great pleasure to present this edition of our magazine, celebrating the achievements and talents of our students. This publication reflects the dedication, creativity, and hard work that define our institution.

Our students have excelled in academics, cultural events, and technical innovations, proving that learning goes beyond textbooks. Their passion and perseverance are truly inspiring.

I extend my heartfelt congratulations to all achievers and gratitude to the editorial team for bringing this magazine to life. May this inspire you to aim higher and continue your journey of excellence.

Best Regards,

**Dr. T. Venkat Vardhan**

President, TTIT

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### *Principal's Message*

Dear Students, Faculty and Readers,

It is a proud moment to present this magazine, a reflection of the hard work, talent, and achievements of our students. This publication highlights the academic excellence, technical innovations, and cultural vibrance that define our institution.

Our students have consistently demonstrated dedication and creativity, making us proud with their accomplishments. I encourage each of you to continue striving for excellence, embracing challenges, and pushing boundaries.

My sincere appreciation to the editorial team and contributors for their efforts. Wishing you all success in your future endeavors!

Best Regards,

**Dr. Syed Arrif**

Principal Dr. TTIT

## VISION OF THE INSTITUTION

To produce technically competent engineers having innovative skills, positive attitude, leadership and professional ethics, with a focus on developing sustainable and new technology.

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## MISSION OF THE INSTITUTION

- M1** : Create a conducive environment for teaching, learning and innovation by providing state of the art infrastructure.
  - M2** : Learn Sustainable and new technologies through industry institute collaborations.
  - M3** : Produce technically competent engineers with ethics, discipline and social consciousness through holistic education.
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## VISION OF THE DEPARTMENT

To produce competent engineers having technical skills oriented towards sustainable development, human values, and professional ethics through comprehensive education in electrical engineering.

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## MISSION OF THE DEPARTMENT

- M1** : To provide a conducive environment in which students can think, learn, and apply.
  - M2** : To provide technical expertise through hands-on experience on real world projects with a focus on sustainable development and professional ethics.
  - M3** : To inculcate a positive attitude and leadership qualities in students through co-curricular activities.
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## PROGRAM EDUCATIONAL OBJECTIVES (PEO)

- PEO-1** : Graduates will have successful professional careers in the industry, adapting to evolving needs with their strong foundation in science and engineering principles.
  - PEO-2** : Graduates will engage in higher studies and professional development, demonstrating innovation and research capabilities in solving real-world problems while being aware of their societal impact.
  - PEO-3** : Graduates will exhibit leadership, professional ethics, effective communication skills, teamwork, and a commitment to lifelong learning.
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## PROGRAM SPECIFIC OBJECTIVES (PSO)

- PSO-1** : Design and develop components or systems in the field of Mechanical Engineering.
- PSO-2** : Apply modern hardware and software technologies to perform structural and thermal analysis.

## **PROGRAM OUTCOMES (PO's)**

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## EDITORIAL MEMBERS

### CHIEF EDITOR

Dear Readers,

It is with great pride that I present this edition of our magazine, a platform that showcases the dedication, talent, and achievements of our students.

I commend all the students and faculty members who have contributed to making this event and magazine a success. May this inspire you to continue striving for excellence in all your endeavors.

Best Wishes,

**Dr. H.G. Shenoy**

Vice principal, Dr.TTIT



**Dr. H.G. Shenoy**

Vice principal, Dr.TTIT

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## STUDENT EDITORIAL BOARD

### FINAL YEAR

ARVIND A  
ROHAN JOSHUA A  
VIVAN M

### THIRD YEAR

ANUSHA K REDDY  
MUSFIRA KAUSER  
RITHISH KUMAR

### SECOND YEAR

RITHISHREYA.S  
NAVYA.Y  
MOHAMMED ILLIYAZ

## FACTS

### 1. 3D Printing Revolution

Mechanical engineers are now using 3D printing to create complex parts that were once impossible to manufacture. From printing lightweight components for aircraft to creating human prosthetics, 3D printing is revolutionizing design and production.

### 2. Self-Healing Materials

New materials are being developed that can "heal" themselves when damaged. These materials, inspired by biological processes, have potential applications in aerospace, automotive, and construction industries, reducing maintenance costs and improving safety.

### 3. Robotics in Surgery

Mechanical engineers are contributing to the design of robots used in minimally invasive surgeries. These robots, equipped with precise mechanical arms, allow surgeons to perform complex operations with greater accuracy and less recovery time for patients.

### 4. Artificial Intelligence in Design

AI-powered software is now assisting mechanical engineers in optimizing designs. It can analyze thousands of design possibilities in minutes, helping to create more efficient and innovative solutions for products and systems.

### 5. Energy Harvesting Technology

New technologies are being developed to harvest energy from everyday activities. For example, piezoelectric materials in floors can generate electricity from footsteps, providing sustainable energy for urban areas.

### 6. Bio-Inspired Engineering

Mechanical engineers are looking to nature for inspiration, such as designing energy-efficient robots that mimic the movement of animals or creating cooling systems modeled after termite mounds. These innovations combine biology and engineering for sustainable solutions.

## SPORTS EVENTS

### CRICKET

Beyond Boundaries: The Spirit of Cricket

Cricket isn't just a sport; it's a blend of strategy, passion, and pure magic. From the crack of the bat to the roar of the crowd, every ball bowled and boundary hit tells a story of grit and glory. It's a game where heroes are made in the heat of competition, and teamwork turns dreams into reality. Here's to the players who chase runs, defend wickets, and embody the true spirit of the gentleman's game!

#### WINNERS



#### RUNNERS



Celebrating the relentless spirit and unwavering determination of our runners-up, who proved that true strength lies in the journey.

### CARROM BOARD

Strikes and Precision: The Charm of Carrom Carrom is not just a game; it's a battle of skill, focus, and strategy. With every perfect strike and smooth glide, players showcase their mastery over angles and force. It's a game where the queen rules, the striker dazzles, and every pocketed coin brings cheers of triumph. Here's to the players who turn a simple board into a stage of precision and excitement!



## VOLLEYBALL

Spike, Set, Serve – The Rhythm of Victory! Volleyball is more than just a game; it's a symphony of teamwork, precision, and adrenaline. With every serve, players ignite the energy; with every spike, they shatter limits. It's a game where the court becomes a canvas, and every move paints a picture of determination and camaraderie. Here's to the players who dive, jump, and conquer – proving that the real magic happens above the net!

### WINNERS



### RUNNERS



Celebrating the relentless spirit and unwavering determination of our runners-up, who proved that true strength lies in the journey.

## BADMINTON

Spike, Set, Serve – The Rhythm of Victory! Badminton is more than just a game; it's a symphony of precision, and adrenaline. With every serve, players ignite the energy; with every spike, they shatter limits. It's a game where the court becomes a canvas, and every move paints a picture of determination and camaraderie. Here's to the players who dive, jump, and conquer – proving that the real magic happens above the net!





## TECHNICAL EVENTS

The Technical Events, organized by Department of Mechanical Engineering Students club: Yantrik Avinya's Dr.T. Thimmaiah Institute of Technology was a remarkable showcase of technical brilliance, creativity, and problem- solving skills. This event brought together bright minds from various disciplines, providing a platform for students to demonstrate their knowledge, collaborate on innovative ideas, and engage in cutting-edge discussions.

The event featured a series of competitions, workshops, and technical paper presentations, fostering a culture of learning and exploration. Participants tackled real-world challenges, pushing the boundaries of engineering and technology. With expert talks, hands-on sessions, and interactive discussions, the event encouraged students to think beyond textbooks and embrace practical applications.

This magazine serves as a reflection of the event's success, capturing key moments, insightful experiences, and the hard work of every participant and organizer. From the initial brainstorming sessions to the final applause, Technical activities stands as a testament to the power of innovation and teamwork.

As you turn these pages, relive the excitement, knowledge, and achievements of Technical activities – a journey of inspiration and excellence.



As you turn these pages, relive the excitement, knowledge, and achievements of Technical Activities - a journey of inspiration and excellence



## CULTURAL EVENTS

The Cultural events, hosted by Department of Mechanical Engineering at Dr.T.THIMMAIAH Institute of Technology, was a spectacular celebration of creativity, diversity, and artistic expression. This grand cultural fest brought together talented individuals from various backgrounds, showcasing their passion for music, dance, drama, fashion, and more.

With an electrifying lineup of performances, exciting competitions, and mesmerizing displays of talent, the event resonated with energy, enthusiasm, and artistic brilliance. From traditional folk arts to modern contemporary acts, Cultural Activities provided a vibrant platform for students to express themselves and embrace the spirit of culture and festivity.

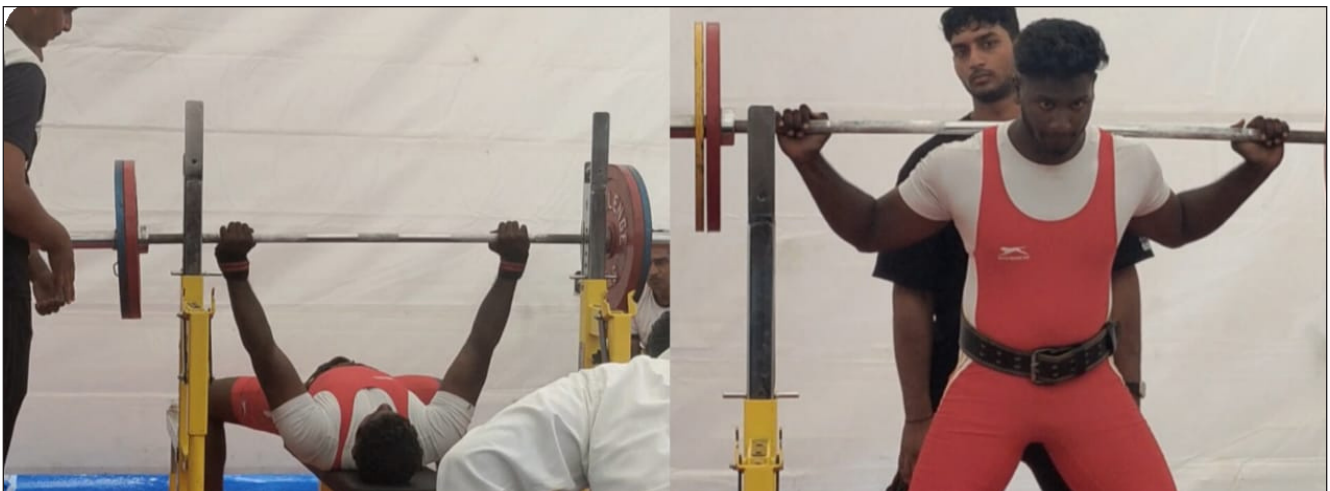
This magazine encapsulates the unforgettable moments, stunning performances, and the dedication of every participant and organizer who made this event a grand success. Each page reflects the colors, emotions, and the incredible journey of Cultural Events, celebrating the unity in diversity that makes college life truly special



Relive the joy, creativity, and magic of Cultural Events as you flip through these pages – a tribute to the power of art and culture

## VTU TOURNAMENTS

### POWER LIFTING



Every lift tells a story of sweat, sacrifice, and strength Powerlifting not only builds muscle but also mental toughness. Every training session is a step towards greatness.

## CELEBRATING STUDENT ACHIEVEMENTS

Empowering the Future: Hands-on IoT Workshop for Mechanical & Electrical Students



Five Days Hands on workshop on Applications of Advanced IOT towards unleashing Job Opportunities was conducted for the students of Mechanical Engineering and Electrical Engineering from 19th to 23rd Feb 2024 in association with GenEd Technologies, Bangalore.

This workshop not only enriched students with advanced IoT knowledge but also prepared them for emerging job roles in the industry. More such industry-collaborated programs will be conducted to bridge the gap between academia and industry needs.



**YUVARAJ T**  
MRCH | 5th Sem

### **Kabaddi Champion: Yuvaraj Secures Victory!**

Mr. Yuvaraj, student of 3rd year has won the winner's prize in kabaddi tournament held at Dr TTIT – KGF.

Yuvaraj's victory in the Kabaddi Tournament reflects his dedication, resilience, and sports excellence. His achievement inspires fellow students to pursue their passions with commitment and hard work.



**KALPESH**  
CSE | 7th Sem



**YUVARAJ T**  
MECH | 5th Sem

### **Kalpesh of 7th Sem and Yuvaraj of 5th Sem Shines in Inter-Branch Cricket Tournament!**

Mr. Yuvaraj, student of 3rd year has won the runner prize in inter branch cricket tournament held at Dr TTIT – KGF.

Yuvaraj's outstanding performance in the tournament showcases his passion, dedication, and competitive spirit. His achievement serves as motivation for aspiring student-athletes to excel in both sports and academics.



**YUVARAJ T**  
MRCH | 5th Sem

### **Yuvaraj Shines as Man of the Match in VTU South Zone Tournament!**

Mr. Yuvaraj, student of 3rd year has won the man of the match prize in VTU south zone inter college cricket tournament.

Yuvaraj's remarkable performance reflects his dedication, talent, and competitive spirit. His achievement is a testament to hard work and inspires fellow students to pursue excellence in sports.



**DARSHAN R**

### **Darshan Named Man of the Match in Inter-Branch Cricket Tournament!**

Mr. Darshan, student of 3rd year has won the man of the match prize in inter branch cricket tournament.

Darshan's stellar performance reflects his dedication, skill, and sportsmanship. His achievement serves as an inspiration for aspiring cricketers to strive for excellence on and off the field.



**ROHIT KUMAR P**

### **Rohith Kumar P Claims Runner-up in Volleyball Tournament!**

Mr. Rohith Kumar P, student of 3rd year has won the runner prize in volley ball tournament held at Dr TTIT – KGF.

Rohith's achievement reflects his team spirit, dedication, and athletic ability. His success serves as an inspiration for fellow students to excel in sports while maintaining a balanced academic life.

## **BATCH TOPPER**



**SRIKANTH K N**  
(1GV20ME011)

### **Honoring Excellence – Our Batch Topper**

Success is not just about intelligence; it is about dedication, perseverance, and an unwavering commitment to learning. This year, Srikanth KN has set a benchmark of academic brilliance, securing the prestigious title of Batch Topper in Department of Mechanical Engineering, Dr.T.THIMMAIAH Institute of Technology With an outstanding academic record and an exceptional grasp of concepts, Srikanth KN has consistently demonstrated hard work, discipline, and a passion for knowledge. Beyond academics, they have also contributed significantly to extracurricular activities, inspiring peers and juniors alike.

Their journey stands as a testament to what determination and a thirst for excellence can achieve. We congratulate Srikanth K N on this remarkable feat and wish them continued success in all future endeavors!

## DEPARTMENT TOPPERS

<b>2023 - 24</b>	<b>FIRST PLACE</b>	<b>SECOND PLACE</b>	<b>THIRD PLACE</b>
<b>SECOND YEAR</b>	 <b>Rithish Kumar J</b> <b>(1GV23ME409)</b>	 <b>Musfira Kouser</b> <b>(1GV22ME008)</b>	 <b>Anusha K</b> <b>(1GV23ME401)</b>
<b>THIRD YEAR</b>	 <b>Yashwanth R</b> <b>(1GV21ME017)</b>	 <b>Jagadeesha N</b> <b>(1GV22ME412)</b>	 <b>Arvind A</b> <b>(1GV21ME002)</b>
<b>FINAL YEAR</b>	 <b>Madhan P</b> <b>(1GV20ME006)</b>	 <b>Prasanth J</b> <b>(1GV21ME406)</b>	 <b>Varun Kumar A V</b> <b>(1GV20ME013)</b>

Success is not just measured by grades but by the dedication, perseverance, and passion for learning that drives an individual to achieve excellence. This year, we proudly recognize the outstanding academic achievers across all departments who have set a benchmark with their exceptional performance in the 2nd, 3rd, and 4th years.

These students have demonstrated remarkable intellect, discipline, and consistency in their academic journey, securing the highest ranks in their respective departments. Their hard work, curiosity, and commitment to learning have not only earned them this honor but also made them an inspiration for their peers.

As they continue their journey, we wish them greater success in academics, research, and future endeavors. Congratulations to all the toppers of Dr.T. Thimmaiah Institute of Technology for their remarkable achievement!