

AERO EXPRESS

DEPARTMENT OF AERONAUTICAL ENGINEERING



PUBLISHER'S

FACULTY CO-ORDINATOR
MR.N.UDAY RANJAN GOUD

STUDENT CO-ORDINATOR
A.SIRISHA
K.SRIHITA

"To succeed in your mission, you must have single-minded devotion to your goal."

NEWS-LETTER

OCT - DEC 2025

DEPARTMENT OF AERONAUTICAL ENGINEERING

From the earliest dreams of flight to the supersonic jets of today and the innovative aircraft of tomorrow, this discipline has consistently pushed the boundaries of what's possible. A field that has quite literally allowed humanity to touch the sky. MLR Institute of Technology offers Aeronautical Engineering that focuses on the design, development, construction, testing, and maintenance of aircraft and related systems that operate within Earth's atmosphere.

VISION

“To be a centre of excellence in Aeronautical engineering with emphasis on Research & Innovation to serve the needs of industry with human values to build strong nation.”

MISSION

M1. Provide quality oriented education, well-grounded in the fundamental principles of Aeronautical Engineering.

M2. Consistently produce top quality Aeronautical engineers with core and multidisciplinary skills, who can become ace leaders and successful entrepreneurs with human values.

M3. Continuously strive for knowledge; undertake Research and Innovation that will contribute to the industrial development of the nation.

HIGHLIGHT

DEPARTMENTAL ACHIEVEMENTS

STUDENT ACHIEVEMENTS

FACULTY ACHIEVEMENTS

NEWS-LETTER

PROGRAM EDUCATIONAL OBJECTIVES :

- **PEO 1:** To prepare the students to excel in Aeronautical engineering and mould their careers for successful employment in industrial, academic and entrepreneurial activities.
- **PEO 2:** Graduates will analyze and synthesize data and apply technical problem concepts which lead to the design of new products and develop technical problem solving skills.
- **PEO 3:** Graduates will have excellent communication skills, ethical attitude and an ability to relate engineering issues to broader social environment.
- **PEO 4:** To provide a passionate academic environment for students that encourage learning of emerging technologies, multi disciplinary areas and acquire leadership qualities.

PROGRAM SPECIFIC OUTCOMES(PSO'S) :

- **PSO1:** Apply engineering and management knowledge and techniques to estimate time and resources needed to complete Aerospace/Mechanical engineering projects.
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- **PSO2:** Recognize the challenging and rewarding careers in the field of Aerospace Engineering.

NEWS-LETTER

DEPARTMENTAL ACHIEVEMENTS

- Aeronautical Engineering Department has organized “LUNAR – National Science Fair 2025” with participation of 300 students on 15-10-2025.
- Aeronautical Engineering Department has conducted Winter Internship Program on “Aerospace Systems Integration & Hands-On Practice” at MLR Institute of Technology from 09-12-2025 to 20-12-2025.
- 10 faculty members of Aeronautical Engineering Department have participated as resource persons in Internship Program on “Aerospace Systems Integration & Hands-On Practice” at MLR Institute of Technology from 09-12-2025 to 20-12-2025.
- Aeronautical Engineering Department has achieved publication of 22 international conference papers indexed in Scopus during September 2025.
- 5 faculty members of Aeronautical Engineering Department have published research papers in SCI/ESCI indexed journals during October–November 2025.
- Aeronautical Engineering Department has achieved 3 patents published in the domain of drones, greenhouse automation, and spraying systems on 19-12-2025.
- 1 faculty member of Aeronautical Engineering Department has received copyright for “Solution for 1D transient heat conduction equation” on 10-11-2025.
- Aeronautical Engineering Department has achieved consultancy projects with HEXAIND Technologies generating revenue up to ₹10,00,000 in November 2025.
- Aeronautical Engineering Department has organized student industrial visit to Air Force Academy, Dundigal with participation of 55 students on 11-12-2025.

NEWS-LETTER

FACULTY ACHIEVEMENTS

- Mr. Nirmith Kumar Mishra, Assistant Professor published a journal on “A Blockchain-Based Authentication Handover Protocol for Autonomous Vehicle Networks” on 30 September 2025.
- Mr. Nirmith Kumar Mishra, Assistant Professor published a journal on “A Successful Cross-Platform Credibility Generation System That Uses Aspect-Based Sentiment Analysis” on 30 September 2025.
- Mr. Nirmith Kumar Mishra, Assistant Professor published a journal on “Adaptive Neuro Fuzzy Inference System Approach for Medical Decision Making” on 30 September 2025.
- Mr. A Sai Kumar, Assistant Professor published a journal on “A Naive Baye’s Approach to Android Mobile Malware Identification with Low Computational Cost” on 30 September 2025.
- Mr. A Sai Kumar, Assistant Professor published a journal on “An Effective and Safe Method for Estimating Depth and Segmenting Pixels in Self-Driving Automobiles” on 30 September 2025.
- Mr. B Manideep, Assistant Professor published a journal on “Developing a Deep Learning-Based System for Automated Speed Limit Identification and Monitoring Using Raspberry Pi” on 30 September 2025.
- Mr. B Manideep, Assistant Professor published a journal on “An Advanced Convolutional Neural Network Model Technique for Detecting and Monitoring Brain Lesions” on 30 September 2025.

NEWS-LETTER

FACULTY ACHIEVEMENTS

- Ms. G Sravanthi, Assistant Professor published a journal on “A Novel Identification and Categorization of Weld Defects in Digitized X-Ray Image” on 30 September 2025.
- Ms. G Sravanthi, Assistant Professor published a journal on “Development of Machine Learning Methods on Crop Prediction Analysis for Plant Disease Identification and Soil Fertility” on 30 September 2025.
- Dr. M S N Gupta, Head of the Department published a paper on “Approximation of an Autonomous Navigation System in UAVs Based on Reinforcement Learning” on 16 October 2025.
- Dr. M S N Gupta, Head of the Department published a journal on “Effect of ZrO_2 Content on Microstructure and Corrosion Behaviour of AZ61/ ZrO_2 Composite Prepared by Friction Stir Processing” on 04/11/2025.
- Dr. M S N Gupta, Head of the Department published a journal on “Enhancing Hybrid Microgrid Dynamics Using an Agent-Based Reinforcement Learning (RL) Framework” on 04/11/2025.
- Mr. Nirmith Kumar Mishra, Assistant Professor has attended FDP on “From Goals to Outcomes: Designing Education for Measurable SDG Impact” from 06/10/2025 to 11/10/2025 organized by AICTE.
- Mr. B Manideep, Assistant Professor has completed a course on “Accreditation and Outcome Based Learning” from Aug–Oct 2025 (8 weeks) offered by IIT Kharagpur.
- Mr. Nirmith Kumar Mishra, Assistant Professor has completed a course on “Aircraft Stability and Control” from Jul–Oct 2025 (12 weeks).

- 55 students of III-II Aeronautical Engineering have attended an industrial visit to Air Force Academy, Dundigal on 11-12-2025.
- 6 students of IV year Aeronautical Engineering have completed internships at ISRO, TATA Advanced Systems, TATA Sikorsky and other industries from July 2025 to December 2025.
- 149 students of Aeronautical Engineering have certified in NPTEL/IIT courses such as “Introduction to Airplane Performance”, “Introduction to Aerospace Engineering – Flight”, “Introduction to CFD”, and “Aircraft Design” during October 2025.
- 10 students of IV year Aeronautical Engineering have certified in NPTEL course “Introduction to CFD” offered by IIT Kharagpur in October 2025.
- 5 students of IV year Aeronautical Engineering have certified in NPTEL course “Aerodynamic Design of Axial Flow Compressors & Fans” offered by IIT Kharagpur in October 2025.
- 15 students of II year Aeronautical Engineering have certified in NPTEL courses “Introduction to Aerospace Engineering – Flight” and “Introduction to Airplane Performance” during October 2025.

- Shaik Shoaib of III year Aeronautical Engineering has participated in South Zone Inter University Basketball Tournament-2025 at SRM Institute of Science and Technology, Tamil Nadu from 24-12-2025 to 28-12-2025.
- M Vyshnavi of Aeronautical Engineering has participated in National Adventure Camp-2025 at Manali, Himachal Pradesh from 10-11-2025 to 19-11-2025.
- S Akash Reddy of Aeronautical Engineering has participated in National Integration Camp-2025 at MLR Institute of Technology from 22-12-2025 to 28-12-2025.
- Mahaboob Yesdan of Aeronautical Engineering has participated in National Unity Day Pledge-2025 at MLR Institute of Technology on 31-10-2025.
- J Anusha of Aeronautical Engineering has participated in “Seva Se Seekhe Campaign” at Arundhathi Institute of Medical Sciences on 17-10-2025.

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PO'S

- **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 to 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.
- **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.
- **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.
- **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.
- **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.

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PO'S

- **PO7: Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws.
- **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.

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- Aeronautical Engineering Department has organized “Space Science and Technology Awareness Training (IIRS)” in collaboration with ISRO from 09-01-2025 to 29-01-2025 with participation of 250 students.
- Aeronautical Engineering Department has organized a seminar on “International Education Services” on 27-01-2025 with participation of 130 students.
- Aeronautical Engineering Department has developed 50+ e-content lecture videos in courses such as Aerospace Vehicle Structures, Thermodynamics, Aerospace Propulsion, UAV Design, and CFD during January–March 2025.
- Aeronautical Engineering Department has organized “AEROTRON 3.0” under IAAA with participation of 120 students on 24-02-2025 to 25-02-2025.
- Aeronautical Engineering Department has organized an expert talk on “Masters in Flight Test Engineering” on 12-02-2025 with participation of 130 students.
- Aeronautical Engineering Department has organized a “Career Guidance Program for Aeronautical Students” on 20-02-2025 with participation of 130 students.
- Aeronautical Engineering Department has undertaken consultancy projects with HEXAIND Technologies worth ₹9,00,000 in March 2025.
- Aeronautical Engineering Department has achieved 3 copyrights in the domain of structural and computational analysis on 02-01-2025 to 03-01-2025.

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- Mr. N Uday Ranjan Goud, Assistant Professor has delivered an invited talk at ZPHS Kucharam on 22-01-2025.
- Mr. N Uday Ranjan Goud, Assistant Professor has served as Jury/Judge at ANURAG University on 25-03-2025.
- Mr. A Sai Kumar, Assistant Professor has received appreciation in Innovation Challenge 2025 Prototype Evaluation at MLR Institute of Technology on 25-01-2025.
- Mr. Nirmith Kumar Mishra, Assistant Professor has received appreciation in Faculty Conclave-V at MLR Institute of Technology from 07-02-2025 to 08-02-2025.
- Mr. A Sai Kumar, Assistant Professor has received appreciation in 10th SAEISS DDC 2025 at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- Mr. Nirmith Kumar Mishra, Assistant Professor has received appreciation in 10th SAEISS DDC 2025 at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- Mr. S Sreekanth, Assistant Professor has received appreciation in 10th SAEISS DDC 2025 at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- Mr. K Arun Kumar, Assistant Professor has published a journal on “Design, Aerodynamic, and Structural Integrity Investigations of Advanced UAV Propeller” on 05-03-2025.

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- Mr. K Arun Kumar, Assistant Professor has published a journal on “Influence of Grain Structure Evolution on AA6061 Alloy” on 30-01-2025.
- Dr. M Satyanarayana Gupta, Professor has attended FDP on “Harnessing Sustainable Energy for Climate Resilience” from 20-01-2025 to 25-01-2025.
- Mr. A Sai Kumar, Assistant Professor has attended FDP on “Unmanned Air Vehicles and Drone Technology” from 27-01-2025 to 01-02-2025.
- Mr. A Sai Kumar, Assistant Professor has attended FDP on “DevOps for Cloud Native Development” from 03-02-2025 to 08-02-2025.
- Mr. Nirmith Kumar Mishra, Assistant Professor has attended FDP on “Unmanned Air Vehicles and Drone Technology” from 27-01-2025 to 01-02-2025.
- Ms. G Sravanthi, Assistant Professor has attended FDP on “AI Tools” from 17-02-2025 to 21-02-2025.

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STUDENT ACHIEVEMENTS

- 40 students of II and III year Aeronautical Engineering have attended an industrial visit to Wings & Props, Gajularamaram on 11-02-2025.
- 10 students of III year Aeronautical Engineering have secured “Best Innovation in Micro Class” at SAEISS DDC 2025 held at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- 10 students of Aeronautical Engineering have secured “Overall Second under Regular Class” at SAEISS DDC 2025 held at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- 10 students of Aeronautical Engineering have secured “Best Aerodynamic Analysis (CFD)” at SAEISS DDC 2025 held at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- 10 students of Aeronautical Engineering have participated in DDC2025 at Karpaga Vinayaga College of Engineering and Technology, Chennai from 28-03-2025 to 30-03-2025.
- 5 students of Aeronautical Engineering have participated in NACDeC competition with project “Supersonic Unmanned Aerial Vehicle” on 20-01-2025.

- 2 students of Aeronautical Engineering have secured I place in District Level Yuva Utsav Cultural Dance at ANURAG University on 25-03-2025.
- 1 student of Aeronautical Engineering has secured III place in District Level Yuva Utsav Painting Competition at ANURAG University on 25-03-2025.
- 1 student of Aeronautical Engineering has secured II place in District Level Youth Parliament at Government City College on 22-03-2025.
- 1 student of Aeronautical Engineering has secured Nari Shakti Puraskar (Arundhati Award) on 08-03-2025.
- 4 students of Aeronautical Engineering have participated in National Science Fair at MLRIT on 28-02-2025.
- 3 students of Aeronautical Engineering have participated in World Women's Day celebrations at Dundigal on 08-03-2025.
- 6 students of Aeronautical Engineering have participated in Republic Day celebrations at MLRIT on 26-01-2025.
- 3 students of Aeronautical Engineering have participated in Walkathon "Walk for Hope" at Hyderabad on 23-03-2025.
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