ABOUT

Andhra TECK LEAGUE

Teck Team Solutions, established in 2014 in Visakhapatnam, Andhra Pradesh, is a renowned training and product development firm specializing in Industry 4.0 technologies. Over the years, we have made significant contributions to the field of technical education and development. Our commitment to innovation and growth has led us to organize various successful events in the past.
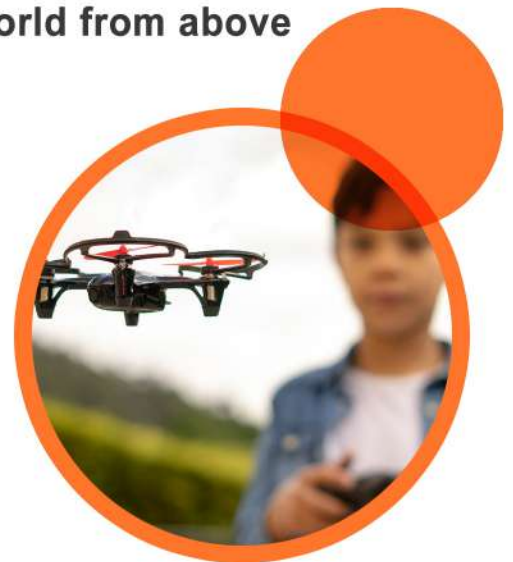
In 2016, 2017, and 2018, we organized the highly acclaimed technical event called **Mechatronics**, which provided a platform for students to showcase their skills and knowledge in the field of various technologies. Building on our previous successes, in 2023, we are thrilled to introduce the upgraded version of our event, known as **Andhra Teck League (ATL).** The ATL event is specifically designed for students, aiming to inspire, educate, and nurture their interest in emerging technologies.

DRONACHARYA

Revolutionizing the way we explore the world from above

The **drone** competition organized in Andhra Teck League (ATL) is named as Dronacharya. Students learn about aerodynamics, electronics, and also, they can design, build, and operate drones. These competitions foster teamwork, collaboration, and communication skills as students work together in teams. Critical thinking and problem-solving abilities are enhanced as students strategize and adapt to overcome challenges in flying the drone.

This drone competition ignites a passion for aviation, robotics, and technology, helping students explore potential career paths. Overall, the Dronacharya contest provides an exciting and immersive learning experience, nurturing essential skills and inspiring future leaders in emerging technologies.

Who Can Apply:

JUNIOR LEVEL

8th to 12th
Standard

SENIOR LEVEL

Any Engineering
Students

Levels of Competition:

This contest will be conducted in 3 different levels

Preliminary Level

Zonal Level

Final Level

Problem Statement

Junior Participants :

- The problem statement for the preliminary level of the Dronacharya competition is to construct and prepare a functional drone.
- Design a drone for flying responsibly and safely. The challenge aims to raise awareness among individuals about the importance of drone flight and its potential positive impact in the real-world environment.
- Each team must procure the **'Drone(link details provided on the last page)',** the only approved model permitted for use throughout the event for junior participants. For specific drone details, please contact the event coordinator.
- The preliminary level of participation involves the construction of the 'Drone' as well as self-learning the skills required for piloting the drone.

Senior Participants :

- The problem statement for the preliminary level of the Dronacharya competition is to construct and prepare a functional drone.
- Design a drone for flying responsibly and safely. The challenge aims to raise awareness among individuals about the importance of drone flight and its potential positive impact in the real-world environment.
- Each team must procure the **'Drone(link details provided on the last page)',** the only approved model permitted for use throughout the event for senior participants. For specific drone details, please contact the event coordinator.
- The preliminary level of participation involves the construction of the 'Drone' as well as self-learning the skills required for piloting the drone.

Levels of contest (Dronacharya) :

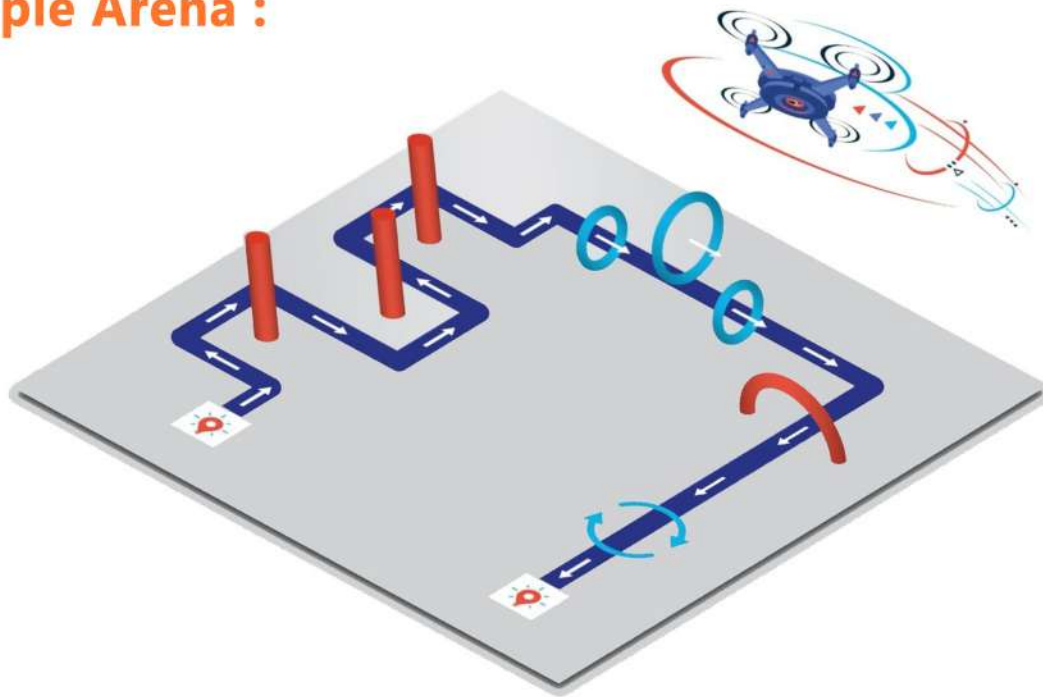### Preliminary Level (Junior & Senior participants) :

- Interested candidates can participate in the competition by purchasing the **'DRONE'** kit by following the below link for **junior participants** and **senior participants** respectively.
- Participants are required to create a 2 Minutes video comprising 1 Minute of flying footage **(Take-off, Landing, Forward, Backward, Left, Right, Rotate 360° (Clockwise & Anticlockwise))** and 1 Minute of explanation about the drone. The video should be submitted to the event coordinator.
- The video should include the pilot actively flying the drone using the remote control.
- The contest coordinator will assess the submitted videos to identify the most exceptional flying demonstrations. Selected pilots will advance to the Zonal level of the competition.
- Eligible pilots who qualify for the Zonal level will receive a confirmation email containing further participation details.
- Drone dimensions should be less than **(LxBxH - 12 inch x12 inch x 6inch).**

Zonal Level (Junior & Senior participants) :

- Invitations will be forwarded to the selected pilots to participate in the Zonal level competition at a designated venue.
- Pilots are required to bring their ' Drone' **(junior participants) / (senior participants)** for the competition.
- Drone dimensions should be less than **(LxBxH - 12 inch x12 inch x 6inch).** We will measure your Drone dimension while entering the competition.
- There is no particular company for Drone. We allowed any Drone as per dimensions.
- The details regarding the structure and layout of the flying arena will be revealed at the time of the competition. The flying arena will not be the same for junior and senior participants. Minute modifications will be there for junior participants in the same arena.
- Pilots will be evaluated based on their flying skills in the race track within the zonal level arena.
- Successful pilots will proceed to the final level, based on their performance and achievements at the zonal level.

Sample Arena :

Rules for Zonal level :

1. The drone should be checked properly while entering the Arena.
2. No testing to fly drones in the arena.
3. The battery should be in full charge if any technical problem in the drone including battery charging will give only a one-time excuse.
4. The pilot can move in the arena along with the drone.
5. Arena dimensions – **(LxB – 20ftx20ft).**
6. The drone should follow the path.
7. The drone can land/touch the arena up to 3 times, after that when the drone land/touch will be eliminated.
8. In the arena, the minute modification will be there for Junior and Senior Participants.
9. Once participants started from the path, if the drone hits any physical object/any technical error occurred and then the drone stopped the participant should continue from the same place/path.

Final Level (Junior & Senior participants) :

- The final level arena will update after the completion of the zonal level competition.
- The final level consists of pilots who have qualified from the zonal level across all zones.
- Based on zonal-level pilot flying skills we will plan a dynamic arena featuring various obstacles, fire paths, death zones, etc where pilots must fly their drones accordingly. The final level arenas will also vary for junior and senior participants accordingly.
- The teams that fly their drones to the finish line in the shortest time, while covering the designated arena will be declared as winners and runners-up respectively.

Rules for final level :

1. The drone should be checked properly while entering the Arena.
2. No testing to fly drones in the arena.
3. The battery should be in full charge if any technical problem in the drone including battery charging will give only a one-time excuse.
4. The pilot can move in the arena along with the drone.
5. Arena dimensions – **(LxB – 40ftx20ft)**.
6. The drone should follow the path.
7. The drone can land/touch the arena up to 3 times, after that when the drone land/touch will be eliminated.
8. In the arena, the minute modification will be there for Junior and Senior Participants.
9. Once participants started from the path, if the drone hits any physical object/any technical error occurred and then the drone stopped the participant should continue from the same place/path.

Rules of contest :

1. Drone flying skills must require kind practice for the final level.
2. Each team participating in the contest consists of a minimum of 2to3 members and must have 2 members, maintaining this composition from the preliminary level until the final level.
3. It is not allowed to replace registered pilots during the competition. The original pilots registered at the beginning must continue up to the Final round.
4. A team can jointly purchase a single **'DRONE'** kit **(junior participants)** and **(senior participants)** respectively for their participation in the contest.
5. Only the **mentioned dimension Drone** kit for **junior participants** and **senior participants** respectively is allowed for participation in the contest, no other drone models will be permitted.
6. Pilots must adhere to safety protocols and follow the competition rules at all times.
7. Any damage to the drones that occurs during the competition is not the responsibility of the event coordinators/organisers.
8. The decision of the judges/evaluators is final at every level of the competition.

Preliminary Level :

1. Participants' drones should be attractive in Flying skills.
2. The 2 minutes submission video should consist of explanations about drones for 1 minute and 1 minute flying of drones by participants.
3. Participants will be selected for the zonal level based on explanation and flying skills in the submission video.

Zonal Level :

1. The ability of the pilots to complete the given arena in the least amount of time while strictly following all competition rules and regulations will be considered when promoting the pilots to final level.
2. Each pilot's overall performance will be scored by judges based on how well the pilots performed flight tricks, avoided obstacles, controlled their speed, and decorated or coloured their drones.

Final Level :

1. In comparison to the Zonal level arena, the final level arena will offer unique and complex challenges.
2. The ability of the pilots to complete the given arena in the least amount of time while strictly following all competition rules and regulations will be considered when promoting the pilots to final level.
3. Each pilot's overall performance will be scored by judges based on how well the pilots performed flight tricks, avoided obstacles, controlled their speed, and decorated or coloured their drones.

Reference Video Links :

Video Link -1: https://www.youtube.com/watch?v=GwIoE1H_9nA
Video Link -2: https://youtu.be/4BrtSBCUjs8

Referral link for Drones:

Note : As per the Drone dimensions we are suggesting some links for drones. Drone dimensions will be stated in contest-level descriptions.
We allow participants while they bring their own drones (own make or purchase).

- https://www.amazon.in/POTLIBABA-Drone-Educational-Skill-Assembly/dp/B0BRG4DN4W/ref=sr_1_1?keywords=diy+drone+kit&qid=1690956210&sprefix=drone+DIY%2Cspecialty-aps%2C233&sr=8-1

- https://www.amazon.in/Pluto-Programmable-Quadcopter-Smartphone-Rechargeable/dp/B06W5QQQJZ/ref=sr_1_2?keywords=diy+drone+kit&qid=1690956210&sprefix=drone+DIY%2Cspecialty-aps%2C233&sr=8-2

- https://www.amazon.in/REES52-Beginner-Quadcopter-altitude-Headless/dp/B0CBFYCHD8/ref=sr_1_6?keywords=diy+drone+kit&qid=1690956210&sprefix=drone+DIY%2Cspecialty-aps%2C233&sr=8-6

- https://www.amazon.in/Ziria-Foldable-Quadcopter-Headless-functionality/dp/B0C5R2JNZ9/ref=sr_1_15?keywords=diy+drone+kit&qid=1690956210&sprefix=drone+DIY%2Cspecialty-aps%2C233&sr=8-15

- https://www.amazon.in/VGRASSP-Flying-Drone-Toy-Kids/dp/B0BN6B8119/ref=sr_1_1_sspa?crid=3PXA72B8NH0R5&keywords=diy+drone+kit+with+remote&qid=1690956362&sprefix=diy+drone+kit%2Caps%2C217&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1

- https://www.amazon.in/Sevriza®-Remote-Control-Unbreakable-Without/dp/B0C7MWPGJB/ref=sr_1_22_sspa?crid=3PXA72B8NH0R5&keywords=diy+drone+kit+with+remote&qid=1690956362&sprefix=diy+drone+kit%2Caps%2C217&sr=8-22-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9tdGY&psc=1

Participation Eligibility :

1. Participation Team Should consist minimum of 02 to 03 members.
2. All team members can register from one primary contact number.
3. Initial registration is mandatory to participate in the event.
4. Every participant should have official ID Card from the respective institution / school.
5. All team members should belong to same institution / school only.
6. Team members should willing to participate zonal & Final level contests at outstation locations as per the schedules.

NOTE: The competition organizers reserve the right to modify the rules and regulations if necessary. They also reserve the right to disqualify any entry that violates the rules or disrupts the competition.

TECK TEAM SOLUTIONS
A Training & Product Development Firm

Contact Us
7799911213 / 7799911214

www.andhrateckleague.com
andhrateckleague@gmail.com