

Two-Day Workshop on RC Fixed Wing Aircraft Modelling

The two-day Workshop on RC Fixed Wing Aircraft Modelling was organized by the Aeromodelling Club, in association with the Department of Aeronautical Engineering, MVJCE. The proposal for the Workshop got approved by the concerned authorities, and was scheduled to be held on 20th and 21st September, 2019. 55 students registered for the Workshop, by paying a fee of Rs. 1260. The venue for the Workshop was the Rajalakshmi Seminar Hall.

On 20th September 2019, the workshop started off with a very brief inaugural function, at 09:30 am. The function was attended by the participants, instructors, event coordinators and the Principal of MVJCE. The Event Coordinator Mr. Vishnu Asokan delivered the welcome address and pointed out the importance of this Workshop. This was followed by a brief description of the Workshop, its relevance and outcome, by Dr. Nagaraj Sitaram, Principal, MVJCE.

At 9.15 am, the first session, 'Theory Session', was conducted by Mr. Dinesh Kumar, Engineer at Skyfi labs. In this session, he spoke about the history of aviation, basic operation principles of flights and its components, the control surfaces, and implementation. The session came to a closure at around 12:00 noon, after a tea break of 20 minutes in between.

Session Two of the day, Design Algorithm, started after 12:00 noon. Firstly, the students were segregated into 11 teams, with 5 members in each team. The instructors distributed the design algorithm manual to each team, and helped them to calculate the weight and weight distribution of aircraft with specific dimensions. This session went on till 1:00 pm. By then, all the teams had finished the theoretical calculations of the required aircraft design.

Session Three of the day, Fabrication according to the pre-calculated dimension, started at around 2.00 pm, after the lunch break. The trainers distributed fabrication kits, excluding electronics, for the 11 teams. This session went on till 5.30 pm. By then, all the teams finished with the fabrication of aircrafts.

Day Two of the Workshop started at 8:00 am, with the continuation of Session Three, at the UAV LAB and Classroom number 320. In the morning session, the teams started to assemble electronic parts into the aircrafts, under the guidance of the trainers. In the UAV Lab, the teams tested their electronic components and its operation, for precise control of the aircraft before flight. The 5-hour informative and interesting session, with a 10-minute break in the middle, ended for lunch, by 1.00 pm. Meanwhile, the 11 teams were ready to test their flying model.

After lunch, the second round of flight component testing resumed in the UAV lab and went on till 02:30 pm, where more students were given opportunity for understanding the flight control operations.

The Fourth and final session of the Workshop, Flight testing, started by 2.30 pm, in the college grounds. Though a few flights crashed during the flight testing carried out by the students, it didn't result in any injury to any person or damage to any property in the college campus. Moreover, the trainers helped students to rectify the problems, and all the 11 models of aircrafts flew perfectly. The RC fixed wing aircraft fabrication session was led by Mr. Guru Datt and Mr. Dinesh Kumar. The aircraft flying session was led by Mr. Guru Datt.

The Workshop came to an end at around 06:00 pm. The valedictory function was held in the UAV Lab. The Chief Coordinator Mr. Vishnu Asokan delivered the vote of thanks to the instructors. Mr. Guru Datt addressed the gathering and spoke about the necessity to continue the work that the students had started at the Workshop. The feedback of the participants was then taken.



Two-day RC Fixed wing workshop organized by Aeromodelling club in association with Dept.Of Aeronautical Engineering, MVJCE on 20th and 21st of September,2019: Principal,MVJCE addressed the gathering at Rajalakshmi Seminar hall on Day 1.



Two-day RC Fixed wing workshop organized by Aeromodelling club in association with Dept.Of Aeronautical Engineering, MVJCE on 20th and 21st of September,2019: Mr.Dinesh Kumar, SkyfiLab Engineer conducting theory session at Rajalakshmi Seminar hall on the first day



Two-day RC Fixed wing workshop organized by Aeromodelling club in association with Dept.Of Aeronautical Engineering, MVJCE on 20th and 21st of September,2019: Mr.Dinesh Kumar guiding participants to fabricate aerofoil using foam wire cutting on second day.



Two-day RC Fixed wing workshop organized by Aeromodelling club in association with Dept.Of Aeronautical Engineering,MVJCE on 20th and 21st of September,2019: Participants with the models they fabricated after the flying session in the college football ground on the second day.

Outcome of the Event

At the end of the Workshop, the students were able to understand the basics of RC Fixed wing aircraft modelling, design, fabrication, testing and application. This will enable and encourage them to pursue the design and development of fixed wing based aircraft models.