Aero-modelling

Aeromodelling basically involves making things that can fly, therefore time and resources are spent on designing the flying objects. The designing of aeromodels involves engineering concepts like aerodynamics, control systems, flight mechanics and electronics (as most of the aeromodels are Radio Controlled) and electrical components.

Moreover, Aeromodelling is the first step for venturing into the field of UAVs (Unmanned Aerial Vehicles), which has numerous engineering applications like using them for video surveillance, mapping, remote sensing etc.

Aeromodelling has a lot to offer for young students with a desire to hone their multi-disciplinary skills and put them to use.

DESIGN AND FABRICATION OF RC PLANE

RC Plane:

A radio-controlled aircraft (often called RC aircraft or RC plane) is a small flying machine that is controlled remotely by an operator on the ground using a hand-held radio transmitter. The transmitter communicates with a receiver within the craft that sends signals to servomechanisms (servos) which move the control surfaces based on the position of joysticks on the transmitter. The control surfaces, in turn, affect the orientation of the plane.

Scientific, government and military organizations are also using RC aircraft for experiments, gathering weather readings, aerodynamic modelling and testing. Unmanned aerial vehicle (drones) or spy planes add video or autonomous capabilities, and may be armed

RC Planes and drones are future technology for many applications.

To gain knowledge about drones we give hands on training to students to build their own RC plane.

Objective :

The Radio Controlled (RC) Aeroplane is becoming an integral part of various defense and commercial applications. Applications of RC plane (Drone) cover surveillance, aerial photography, traffic monitoring, surveying and much more. The objective of the workshop is to share expertise of designing and assembling RC plane with student fraternity at large.

**Workshop Course Contents**

1. Basics of aerodynamics

2. Different types of wing designs and working

3. Electronics and electrical parts required in RC plane

4. Design specifications of RC plane

5. Techniques to improve design of RC plane

6. Stability concepts of RC plane

7. Testing of RC planes

8. Importance of control in RC plane

9. Autopilot system

10. Government restrictions on wireless transmission

11. Hands on-RC plane design (Scratch building)

