



Workshop on AeroModelling & Aircraft Designing

This workshop is dedicated to learn the technology behind making of aircrafts. It help and encourage the participants to solve real time problem involved in making of glider aircraft, besides this live demonstration of RC plane will also be shown so that student will stimulate their theoretical knowledge in to practical.

Topics to be covered in Wings Workshop Session 1

- o Introduction to Aeromodelling
- o Discuss Goals of Workshop
- o A brief introduction about modeling Aeroplanes -Static and Flying models
- o Explore different categories - Free Flight, Powered Free Flight, Control Line and Radio-Control Flying
- o Materials in Aeromodelling

Session 2

- o Getting your Hands Dirty
- o Construction of the 40cm Balsa Glider from the Pre-cut KIT

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- o Construction of the 40cm Balsa Glider from the Pre-cut KIT
- o Flying the 40cm Balsa Glider
- o Experimenting with the different Wing Configurations & Learning

Session 3

An Introduction to Flight

- o What Makes Planes Fly?
- o Overview of Flight Control Surfaces
- o The Four Basic Forces of Flight
- o Basic Terminologies
- o How Planes can Maneuver

Session 4

An Introduction to Gliders

- o What are Gliders? How do they Glide?
- o Understanding the Wing and its Importance
- o Types of Wing Construction
- o Basic Glider Design - What goes where?

Session 5

- o Design a Glider within given Constraints & Guidelines
- o Discuss the Designs

Session 6

- o Cutting Techniques for Balsa
- o Cutting the Design from Balsa
- o Sanding & Smoothing Techniques
- o Sanding & Smoothing the Cut Balsa Designs- Putting it all together
- o Discuss concepts of Balance and Center of Gravity affecting Flight
- o Discuss techniques to Chuck
- o Flying the Gliders - Chuck & Catapult Launch

Session 7

Demonstration of RC Flying

- o Flying Demo of Basic Aerobatics, World War II Maneuvers, Pattern Flying & Stunt Flying

Practical Session

- o Designing the individual part list as in **figure - a.**
- o Assembling the glider as shown in **figure - b.**
- o Giving the final touch as in **figure - c.**



figure - a



figure - b



figure - c

Duration

The duration of this workshop will be two consecutive days, with eight hour session each day in a total of sixteen hours properly divided into theory and hands on sessions

Certification A '**Certificate of Participation**' by HoriZON (An Unit of MBS Group) and IIT Indore to all Participants of this workshop. At the end of this workshop, a small competition will be organized among the participating students and winners will be awarded with a '**Certificate of Merit**'.

Eligibility It's a basic level workshop so there are no prerequisites. Any one interested, can join this workshop.

Fee Rs 1000/- (inclusive of all Taxes)per participant