

ZONAIR

August 26 - 28, 2019

ZONAIR is an advanced engineering software application used for computation of aircraft flight loads that can include aeroelasticity and aerothermoelasticity effects. ZONAIR Training will help users gain an understanding of the theories and applications of ZONAIR. Users will be guided through the many features of ZONAIR including the formulation of high-order panel method, Trim, Aeroloads Analysis, and Aerothermodynamics.

DAY ONE

- Introduction
- ZONAIR Overview
- Theoretical Foundation of ZONAIR
- ZONAIR Input Data Structure
- Bulk Data Cards for Aerodynamic Panel Modeling
- Primitive Bulk Data Cards for Aerodynamic Modeling
- Bulk Data Cards for Thin Wing Modeling
- Bulk Data Cards for Curved Wake Modeling
- Bulk Data Cards for Automated Panel Model Generation
- Aerodynamic Modeling Guidelines
- Aerodynamic Modeling for Complex Configurations Control Surface Modeling
- Aerodynamic Analysis for Rigid Aircraft
- Questions/Answers

DAY TWO

- Spline
- Aerodynamic Analysis with Structural Flexibility Effects
- Static Aeroelastic/Trim Analysis: Theoretical Background
- Static Aeroelastic Analysis: Trim Analysis and Bulk Data Card Input
- Critical Loads of a Generic Transport Aircraft
- Aeroheating Analysis
- Example for Aeroheating Analysis: Compact Kinetic Energy Missile (CKEM)
- Hypersonic Aerodynamic Analysis on a 15° Blunt Nose Cone
- Questions/Answers



ZONAIR Training Schedule

DAY 1 – MONDAY, AUGUST 26

8:30 am - Welcome Check-In
9:00 am - ZONAIR Overview
10:00 am –
10:30 am - Break
10:40 am –
11:30 am –
12:00 pm - Lunch Break
1:00 pm –
3:00 pm –
3:30 pm - Break
3:40 pm –
4:40 pm - Question & Answer
5:00 pm - Class Dismissed

DAY 2 – TUESDAY, AUGUST 27

9:00 am -
10:30 am - Break
11:10 am -
12:00 pm - Lunch Break
1:00 pm -
3:30 pm - Break
3:40 pm -
4:40 pm - Question & Answer
5:00 pm - Class Dismissed

DAY 3 WEDNESDAY, AUGUST 28

9:00 am - Hands-On Training
10:30 am - Break
10:40 am - Continue Hands-On Training
11:40 am – Questions & Answers
12:00 pm - Lunch Break
1:00 pm - Continue Hands-On Training
3:30 pm - Break
4:40 pm - Question & Answer
5:00 pm - Class Dismissed

