INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal, Hyderabad - 500043, Telangana

AERONAUTICAL ENGINEERING

ATTAINMENT OF COURSE OUTCOME - ACTION TAKEN REPORT

Name of the faculty:	**Dr. YAGYA DUTTA DWIVEDI**	Department:	**Aeronautical Engineering**
Regulation:	**IARE - BT23**	Batch:	**2023-2027**
Course Name:	**Aerodynamics**	Course Code:	**AAED08**
Semester:	**IV**	Target Value:	**60% (1.8)**

Attainment of COs:

	Course Outcome	Direct Attainment	Indirect Attainment	Overall Attainment	Observation
CO1	Illustrate the aerodynamic flows with velocity potential for non-lifting and lifting flow based on fundamental laws of aerodynamics using Kutta-Joukowski theorem.	1.20	2.10	1.4	Not Attained
CO2	Make use of thin airfoil theory to ascertain aerodynamic characteristics, centre of pressure, and generation of lift force for the infinite aspect ratio wing using Kutta trailing edge condition.	1.20	2.10	1.4	Not Attained
CO3	Develop the vortex model for flow past of finite wing to ascertain drag using Kelvin and Helmhotz theorem, and Biot-Savart's law.	1.20	2.10	1.4	Not Attained
CO4	Demonstrate the influence of taper, twist, sweep back, and Delta wings for the generation of the aerodynamic forces using Source Panel, Vortex panel and Vortex lattice methods.	1.20	2.10	1.4	Not Attained
CO5	Illustrate the effect of interference due to wing body, propeller and other non-lifting surfaces for the total aerodynamic characteristic's estimation using Cauchy-Reiman relations and KuttaJoukowski transformation.	1.20	2.10	1.4	Not Attained
CO6	Compare the basic concepts of Viscous flow model with Inviscid flow model for the finite wing by using Displacement body model and Wall transpiration model.	1.20	2.10	1.4	Not Attained

Action Taken Report: (To be filled by the concerned faculty / course coordinator)

CO1: Conducted additional lectures revisiting fundamental laws of aerodynamics and potential flow theory.
CO2: Organized remedial sessions on assumptions and derivation of thin airfoil theory.
CO3: Provided focused lectures on vortex theory, circulation, and wake formation for finite wings
CO4: Explained the influence of taper, twist, sweep, and delta wings through comparative aerodynamic analysis
CO5: Reinforced concepts of aerodynamic interference between wing–body, propeller, and non-lifting surfaces
CO6: Conducted revision lectures highlighting differences between viscous and inviscid flow assumptions

Course Coordinator **Mentor** **Head of the Department**

Head of the Department
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