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 - UG20**	Batch:	**2022-2026**
Course Name:	**Aircraft Stability and Control**	Course Code:	**AAEC24**
Semester:	**VI**	Target Value:	**60% (1.8)**

Attainment of COs:

	Course Outcome	Direct Attainment	Indirect Attainment	Overall Attainment	Observation
CO1	Identify the concept of static stability in longitudinal, lateral and directional modes by using mathematical expression for different aircraft stability conditions.	0.90	2.10	1.1	Not Attained
CO2	Solve Solve the design problems of the airframe components considering the aircraft static stability by using stability criteria equations and plots.	0.90	2.10	1.1	Not Attained
CO3	Make use of the aircraft equations of motion in 6- degree of freedom and transform one axis to another axis system by using mathematical formulations for understanding the behavior in different flight maneuvers.	0.90	2.10	1.1	Not Attained
CO4	Develop the procedure to linearization of equations of motion by using perturbation theory for determining aerodynamic derivatives of the airplane.	0.90	2.10	1.1	Not Attained
CO5	Examine the different types of dynamic modes in longitudinal, lateral and directional motion for the aircraft and their influence on dynamic stability and safety.	0.90	2.10	1.1	Not Attained
CO6	Apply the advance theories of flight dynamics in design of modern control airplane control systems for enhancing aircraft performance, Modern control systems and autopilot system.	0.90	2.10	1.1	Not Attained

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

CO1: Additional tutorial sessions were conducted focusing on derivation and physical interpretation of static stability criteria using mathematical expressions.

CO2: Extra problem-solving sessions were organized emphasizing design-oriented stability calculations using standard criteria equations and plots.

CO3: Step-by-step explanation of six-degree-of-freedom equations was provided with simplified assumptions.

CO4: Remedial classes were conducted on nonlinear to linear system transformation concepts.

CO5: Special lectures were delivered on longitudinal and lateral-directional dynamic modes such as phugoid, short period, Dutch roll, roll subsidence, and spiral modes

CO6: Advanced concepts of modern control theory and autopilot systems were introduced using simplified block diagrams.

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

Head of the Department
Aeronautical Engineering
INSTITUTE OF AERONAUTICAL ENGINEERING
Dundigal, Hyderabad - 500 043