SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution
Coimbatore – 35

Accredited by NBA – AICTE and Accredited by NACC – UGC with 'A++ Grade
Approved by AICTE , New Delhi and Affiliated to Anna University , Chennai.

DEPARTMENT OF AEROSPACE ENGINEERING

19ASO301 BASICS OF AERONAUTICAL ENGINEERING

UNIT 2 – AERODYNAMICS

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- *Aerodynamic Forces*

- *Drag*

- *Mach Number*

- *Center of Pressure & Aerodynamic Center*

- *Components of Airplane*

- *Anderson. J D, "Introduction to Flight", McGraw-Hill, 1995*

- *Richard S. Shevel, "Fundamentals of Flight", Prentice Hall, 2010*

- *The Normal and Axial forces in an aircraft are due to the distributed loads imposed by the Pressure and Shear stress distribution.*

- *Center of Pressure is the point through which the resultant of the Normal and Axial forces act.*

- *If the moments of the all the forces are taken about the Center of Pressure, integral of the moments will be ZERO. In simple terms, it is the point on the body about which the aerodynamic moment is ZERO.*
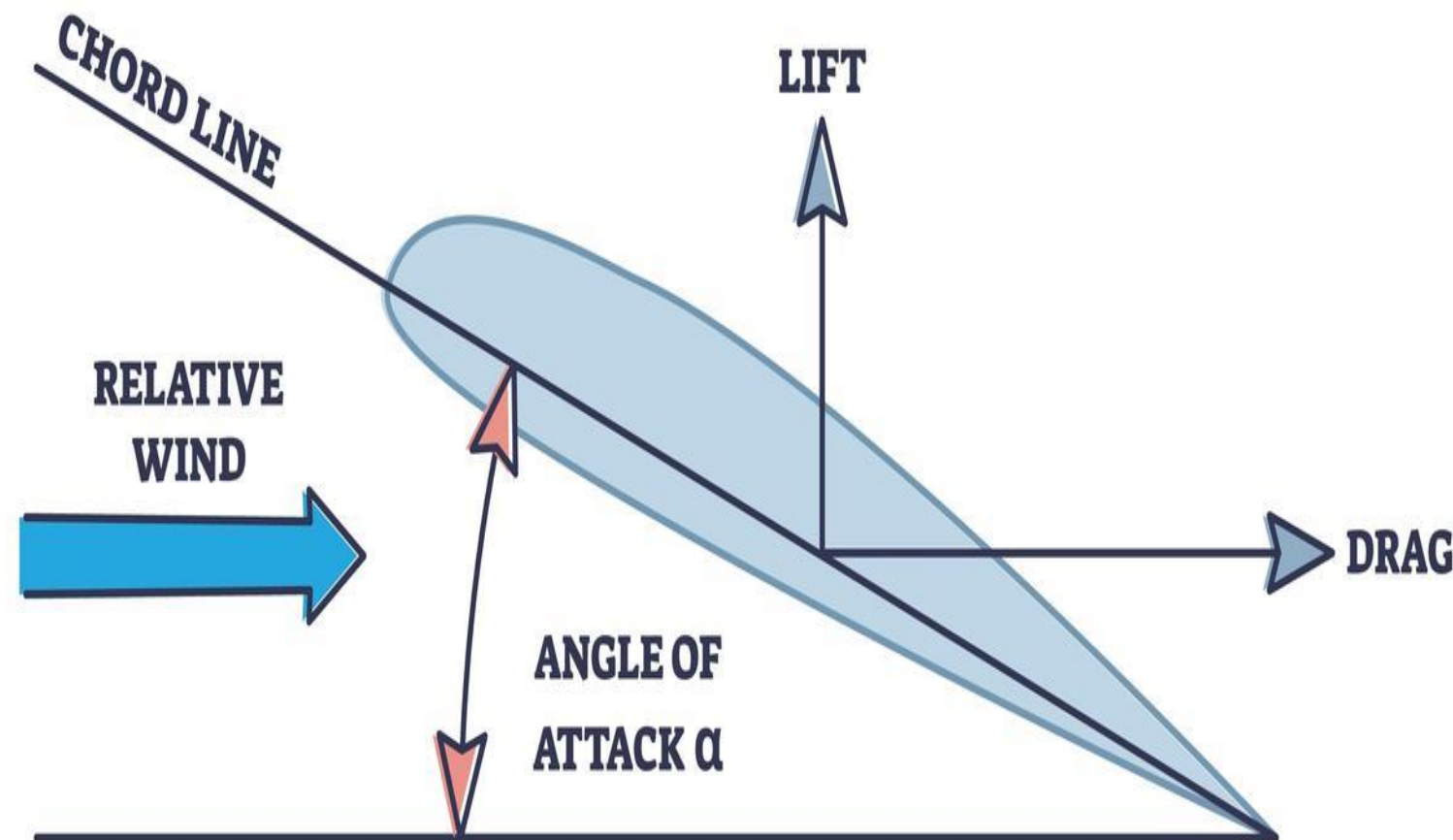
ANGLE OF ATTACK

The **Angle of Attack (AoA)** is defined as the angle of incoming wind relative to the aircraft's reference line.

In other words, angle that the incoming air makes with the fuselage plane.