

Assignment #5

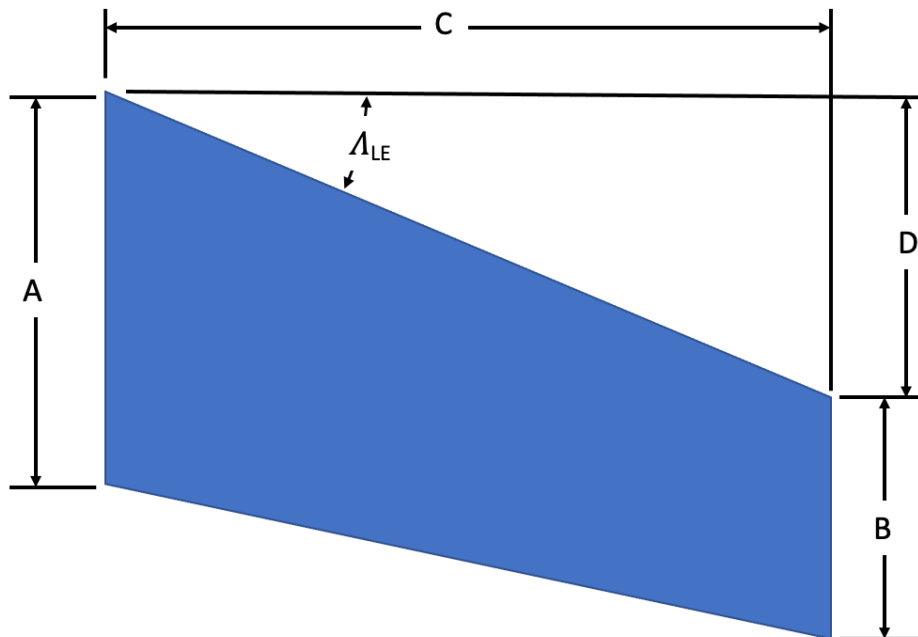
AE 484 Spring 2022

Assigned: 03/07/2022

Due: Friday 03/11/2022. Submit the report on compass under one of the group members.

Wing Core Dimensions

Using the schematic below submit the labeled dimensions. These are the dimensions of the wing core so remember to subtract the thickness of the 1/16" balsa sheeting which will cover the top and bottom of the wing. Also submit the name of the airfoil that you have selected for your aircraft and the *.dat file of the points nondimensionalized by the chord length. These will be used to order your wing cores so they can be manufactured over spring break.



Root Chord Length (A) = 14.5"

Maximum Thickness of the Airfoil at the root = 1.635"

Tip Chord Length (B) = 7.5"

Maximum Thickness of the Airfoil at the tip = 0.783"

Wing Semi-span (C) = 34.9"

Wing Tip Leading Edge Lay Back Distance (D) = 14.96"

Leading Edge Sweep Angle (Λ_{LE}) = 23.2 degrees

Airfoil Name: NACA 23012

*.dat file of the airfoil: NACA23012.dat