

## Department of Mechanical and Aerospace Engineering MEE 440/AEE 521 – Flight Vehicle Performance/Dynamics Homework-

1. For the aircraft assigned to you and use the corresponding aircraft data, provided drawings. Extract the relevant geometric parameters and provide estimates for all the longitudinal coefficients. Make sure to have all the necessary parameters required to compute the following parameters. Submit the homeowrk as a MATLAB CODE. Display only the required parameters.

## **Aerodynamic Parameters**

- $C_{Y_{\beta}} =$
- $C_{Y_{\delta_A}} =$
- $C_{Y_{\delta_R}} =$
- $C_{n_\beta} =$
- $C_{n_{\delta_A}} =$
- $C_{n_{\delta_R}} =$
- $C_{l_{\beta}} =$
- $C_{l_{\delta_A}} =$
- $C_{l_{\delta_R}} =$

- $C_{l_p} =$
- $C_{Y_p} =$
- $C_{n_p} =$
- $C_{l_r} =$
- $C_{Y_r} =$
- $\bullet$   $C_{n_r} =$