

F010103 Initial Design Reviews

2014/04/11

You will have four minutes to present information on your project in the form of a PowerPoint presentation. Wang Yu will put your presentation on a flashdrive so that it is ready when it is your time to speak. You will have one minute for setup.

At this point in the project, some values will have been calculated, and some selected based on competitive aircraft.

It is suggested that you show the following:

- Summary of mission requirement, listing:
 - Payload
 - Range
 - Mission basis (NBAA, FAR 121 Domestic, or FAR 121 International).
- Names of existing competitive aircraft.
- Three views (plan view, side elevation, and front elevation) of your airplane (hand-drawn is ok, as long as they are neat, understandable, and to scale). Point out any innovative features that might make your airplane superior to existing competitive airplanes.
- Show overall dimensions. Reference wing area must be consistent with your selected value of W/S .
- Show location of MAC, based on trapezoidal reference area
- Sketch of cabin cross-section for economy seating. For airliners, show outline of seats in cabin, and cargo containers in cargo hold. For executive jets and some regional jets, cargo space is usually in the rear of the airplane.
- Sketch of landing gear, showing location, longitudinal tip-up and lateral tip-over margins (this implies making a first estimate of forward and aft c.g. travel as percentage of MAC).
- Calculated value of MTOGW.
- Selected values of
 - Sweep
 - Aspect ratio
 - Taper ratio
 - Average wing thickness/chord ratio
 - Horizontal and vertical tail volume coefficients.
- Plot of T/W vs W/S with constraint lines for landing, takeoff and second-segment climb. Show your selected value of T/W and W/S .

Send your presentation as a .ppt file, to Wang Yu by 22:00 on April 10.