

AOE 4065 - Aircraft Design

Mid Term Design Review Requirements: Oct . 21/23

These comments are directed toward the AIAA Design Teams, but are essentially appropriate for the LU/AVID/VT and MAV Teams too.

Overall: From your initial individual concepts, identify 2 (or preferably 3) (*with good drawings*) that best respond to the **RFP**. The final preferred concept will be selected from these and presented in the final presentation for this semester. This concept matrix should reflect a range of configuration concepts. Make sure you are *totally* responsive. The mid-term design review should include:

- Your analysis of the RFP - *What is really important?*
- Key mission and specific project “drivers” -
as listed in the RFP, how do these requirements affect the choice of a concept?
- Discuss your concept matrix, and the relationship to comparator aircraft
How does each concept address the mission drivers and project goals? How did you arrive at these concepts? Define the **selection criteria**, *and* the **decision making process** and supporting technical/business/marketing analysis, **emphasizing the critical fundamental configuration decisions** (pro/con charts, *etc.*).
- Discuss the sizing of your concepts, constraint diagrams and the control concept.
- Describe your cost methodology and status.
- What is your position on the role of advanced technologies?
- What are your current critical issues? How do you plan to resolve these issues?
- How do you plan to arrive at a preferred concept family for the final semester presentation?
- tradeoff studies and selection criteria; *the decision making process.*
- Discuss your operation and organization as a team, and any problems.
- Conclusion (every presentation has to have a conclusion chart)

Format:

1. Group leader will make opening and closing remarks. Each member of the team should take part in the presentation. Make sure the work appears to be well coordinated. Presentations should be 30 minutes, with 10 minutes allowed for questions. Presentation timing counts, along with the technical content and appearance of charts. Few, if any, notes should be used.
2. Two hardcopies of the presentation should be handed out before the presentation begins (do not make too many charts, make sure each one has a message!). Viewgraphs should contain specific technical information, but letters should remain large enough to see easily. (Note: viewgraphs are properly made in landscape format, NOT portrait. Viewgraph titles go on the top of the viewgraph, just the opposite of report figure titles, which go on the bottom. Also, charts should be centered, space well utilized, and the message should be clear. Don't use bold for everything. Title chart should have date, purpose of presentation and names of presenters. Practice to look at the VG on the laptop, not the screen. Look and speak to the audience.

Review the Lecture Overheads: #4: Planning, and #10: Communications, in preparation for your work as a team, and for planning your presentation.