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Seraphin H Yeung *(They/Them)* **(https://canvas.eee.uci.edu/courses/70898/users/26735)**
AUTHOR | TEACHER
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Midterm Report Feedback and Fixes for the Final

The midterm report will be incorporated into the final report as part of the aircraft sizing section. The following is the minimum of what should be done to receive full credit.

- **Do not use aluminum lithium**
  - Conventional **all** aluminum
  - Advanced aircraft should be a combination of composites
- JT9D advanced should be 10% increase in power plant weight and a 10% decrease in SFC
- Both designs should be **6 abreast** and **single aisle**

- **Present at least two aircraft for each section of the paper**

- Any designs that have span > 125 ft is **invalid**. Do not present any final designs that have span over 125 ft

- Have the comparisons for advanced aircraft and conventional (minimum for credit):
  - Below should be in a table or chart or graph
    - Wing weight comparison
    - Tail weight comparison
    - Fixed Equipment weight comparison
    - Fuel weight comparison
    - Effects of advanced engines

- Performance
- Fuel Consumption
- Powerplant weight

- Have at least the following for *both* conventional and advanced aircraft **(4 total plots)**
  - AR vs TOGW
  - AR vs DOC
    - Above plots should agree on minimum AR within 1 unit
    - AR should at least span 6-12
    - Minimum values of AR should be **clear and not occur at extreme ends** of the above range

- **Payload range plots for both aircraft** should be superimposed on the same plot
  - At the design point range (~4000 nm) the payload weight should be exactly the same for both aircraft. This should be the **intersection point** of the two curves.
    - If the above does not happen, something is wrong with the calculations
  - Empty range should be around 5-6k nm.
    - If the above does not happen, something is wrong with the calculations
  - Plot should have exactly 3 slopes per curve and 3 points of inflection. Plots should not be curved or have more than 3 points.

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