Report Layout Guidelines

	PDR	FDR
Report Language	English	
General Report Content	a) Cover Page b) List of Contents c) List of abbreviations and symbols d) Your text including pictures, charts and tables e) Attachments f) Bibliography	
Header	On each page except cover page: Left hand side: name of university, right hand side: team name.	
Footer	On each page except cover page: Left hand side: Date of submission, right hand side: page number/total number of pages on.	
Max no. of pages	• 10 with respect to d) above • 5 with respect to e) above	• 25 with respect to d) above • 10 with respect to e) above
Cover page must state:	• Type of report (eg Preliminary Design Report) • Name and address of your university and model flying club if applicable • Team name • Name of team captain (first name, family name, eMailAdress) • Names of team members (first name, family name, eMailAdress) • Name of supervising faculty member • Date of submission	
Paper Format	DIN A4 or letter (8.5“ x 11“), portrait	
Font and font size	Text: 11pt, Arial, block formatted Heading: 13 pt, bold, Arial Sub-header: 12pt, underlined, Arial Header: 8pt, Arial Footer: 8pt, Arial	
Line spacing within text	single	
Line spacing between paragraphs	double	
Line spacing before and aft of headers	double	
Page margins	Top: 2,5 cm; Bottom: 2 cm, Left: 2,5 cm, Right: 2,5 cm	

Report to be submitted as:	PDF

Reports Contents Requirements

Preliminary Design Report – PDR

The preliminary design is part of the design process in which rough sketches are created with respect to the aircraft's configurations. During the preliminary design, your first idea is optimized to fit into the necessary parameters. The preliminary design phase ends when a refined feasible baseline design layout was identified.

The PDR must include:

1) Introduction (contain a brief description of competition task to be clear on the understanding)
2) Possible aircraft configuration (contain a list of aircraft configurations looked and including their "pros" and "cons" with respect to the mission profile. Reasons must be given for the baseline design finally chosen with regard to UAS regulations)
3) Framework and preliminary details (for the different aircraft configuration: rough estimates on weight, wing and thrust loading, center of gravity calculations, performance, a preliminary wing and empennage design, payload box, mission sensor, flight controller, construction methods)
4) Mutual decision of aircraft and system design (based on the framework conditions and the preliminary detailed consideration of the configuration)
5) Cost estimate (based on the decision above (4))
6) Project schedule (based on the decision above (4))
7) The report is supplemented by a 3-view drawing of the baseline design (based on the decision above (4))

Final Design Report – FDR

With the Final Design Review, the design is completed and all details are clarified. The jury gets a precise overview of the aircraft and the individual components. The FDR contains a detailed description and detailed technical specifications of the aircraft including a performance computation that will be checked against the flight results. A proof is required, that the aircraft fulfils the flight requirements by using a compliance matrix based on detailed computations. The FDR also indicates the method of construction of the various parts of the aircraft.

The FDR must include:

1) Introduction (includes a brief description of whether there have been any changes to the initial determinations in the PDR and, if so, why.)
2) Aircraft configuration (contains again the description for the corresponding aircraft configuration in relation to the mission)
3) Framework and design details (includes the description of the design for the individual components as a basic information but not limited to the following subitems):

    a. Fuselage (Material an Configuration)
    b. Wing (Material and Configuration/Calculation)
    c. Tail-Unit (Material and Configuration/Calculation)
    d. Gear (Material and Configuration)
    e. Engines (selected type, power-rating)

   f. Electrical systems (selected components and interconnection block diagram)
   g. Camera Systems and image acquisition (selected components and interconnection block diagram)
   h. Flight controller (selected components and interconnection block diagram)

4) Specification Details:

   a. Calculation on weight,
   b. Calculation of wing-lift
   c. Calculation of thrust loading,
   d. Calculations of CG
   e. Calculation of performance

5) List of Cost
6) Adapted project schedule
7) Any report of possible flight-experience
8) The report is supplemented by a 3-view drawing of the baseline design