

# Formula Student 2023 UNIVERSAL Design Judging Score Sheet (FS Class and Concept Class)

Max Points	Assessed Area	Points Awarded	Comments (Judges to highlight particularly strong or weak aspects of the design in each assessed area)	
10	<b>Design Report Score</b> (quality of pre-submitted report)			
30	<b>“A” Overall Vehicle Concept</b> (Major choices, e.g. powertrain and mass. Cost & weight schedules, benchmark data. Design integration, sales appeal)		GOOD	POOR
30	<b>“B” Structural Design inc Suspension &amp; Brakes</b> (Specifications, use of design tools & analysis. Load cases and load path appreciation. Safety considerations)		GOOD	POOR
35	<b>“C” Powertrain concept &amp; choice, simulation, design, &amp; analysis</b> (Possible choices explained, Predictive simulation, actual tests, margins of safety and errors explained.) Fail safe modes considered. Costs. Market appeal. Appropriate component sizing for batteries (where used) and machine (kW, kWh, C-rates) with supporting validation		GOOD	POOR
20	<b>“D” Overall Timing, Manufacturing, Procurement Plan plus Team Organisation Plan</b> (Plan to design, procure and build and test full car for next year) (Team organisational structure, resource management, risk analysis and data sharing)		GOOD	POOR
25	<b>“E” Design for Manufacture &amp; Profit, Customer Respect and Innovation. Lessons learnt from Prototype Parts. Build Quality, Preparation and Indicators of Reliability</b> (Manufacturing understanding, Added value & innovation. Customer base considered) (Lessons learnt from screen to actual item process) (Quality of manufacture and assembly, fit and finish and considerations to mitigate likely failure points, e.g. harness security, fluid pipe location etc.)		GOOD FS Class Only Vehicle Running Yes/No (delete as appropriate)	POOR
150	<b>DEDUCTIONS (up to -50 max)</b> <b>ONLY use for lack of knowledge</b>		<u>Overall Summary (Good Stuff)</u>	<u>Overall Summary (Poor Stuff)</u>
	<b>Total (before moderation)</b>			

- The team should explain why they chose this design and from what other possible solutions, how they plan to execute it (timings, costs etc.), and justify fully with facts and data why it will be a successful design completed on time and within budget.

Form completed by (write name in BLOCK CAPITALS): \_\_\_\_\_