

## Scoring Explained – Field Score



Team Code	Field A	Field B	Field C	Normalized A	Normalized B	Normalized C	Removing Lowest Field Score	Total Field Score
T1	2000							
T2		100						
T3			50					

Teams may participate on the same field during different runs of the tournament. In this example, for the first run of the competition, the team T1 had the Field A, while T2 the Field B and T3 the Field C. This is because there are 3 different fields on the venue running simultaneously.

The score above may be seen after the first run of the competition.

At the end of the tournament, all teams will have a run on every field of the competition.

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Team Code	Field A	Field B	Field C	Normalized A	Normalized B	Normalized C	Removing Lowest Field Score	Total Field Score
T1	2000	150	100	1	0.75	0.6667		
T2	1000	100	150	0.5	0.5	1		
T3	500	200	50	0.25	1	0.3333		

Once all the teams participate in a field, the score for that field will be normalized. This means  $(\text{Field score}) / (\text{Field score of the best team})$ . Therefore, the maximum score possible per field is 1.

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Team Code	Field A	Field B	Field C	Normalized A	Normalized B	Normalized C	Removing Lowest Field Score	Total Field Score
T1	2000	150	100	1	0.75	0.6667	1.75	0.875
T2	1000	100	150	0.5	0.5	1	1.5	0.75
T3	500	200	50	0.25	1	0.3333	1.33	0.6667

When removing the lowest field score, the normalized value will be chosen. This is because the normalized value is the one that will be considered when calculating the Total Field Score.

Note that for team T3, the lowest normalized score is Field A even though the Field C score is the lowest individual value.

The total field score is calculated as the mean of the addition of all field scores (removing the lowest field score). For this example, there are 3 fields. If we remove the lowest score, it means the mean will be calculated dividing the final score by 2.

## Scoring Explained – Rubrics



Team Code	TDP	Engineering Journal	Poster	Normalized TDP	Normalized Engineering Journal	Normalized Poster	Normalized Rubrics Score
T1	24	48	6	0.25	1	0.3333	0.5667
T2	96	36	12	1	0.75	0.6667	0.8333
T3	48	24	18	0.5	0.5	1	0.6

Each document has its own rubric for evaluation. Regardless of the maximum score possible on each rubric, the scores will be normalized, allowing each document to have a maximum score of 1.

The normalized rubrics score is calculated as  $(0.4) \times (\text{Normalized TDP}) + (0.4) \times (\text{Normalized Engineering Journal}) + (0.2) \times (\text{Normalized Poster})$ .

## Scoring Explained – Technical Challenge



Team Code	Technical Challenge	Normalized Technical Challenge Score
T1	1200	1
T2	840	0.7
T3	575	0.4792

The number of mini-tasks as well as the scoring for the technical challenge will be shared on-site after the scoring runs have ended. The scoring mechanism will be based on the number of mini-tasks, time assigned for the challenge and tasks difficulty. The end score will be a single number, where the maximum possible score will be determined based on the Technical Challenge presented.

## Scoring Explained – Final Score



Team Code	Total Field Score	Normalized Rubrics Score	Normalized Technical Challenge Score	Total Score	Total Score (%)
T1	0.875	0.5667	1	<b>0.8258</b>	<b>82.58%</b>
T2	0.75	0.8333	0.7	<b>0.7617</b>	<b>76.17%</b>
T3	0.6667	0.6	0.4792	<b>0.6346</b>	<b>63.46%</b>

The total score is calculated as  $(0.7) \times (\text{Total Field Score}) + (0.2) \times (\text{Normalized Rubrics Score}) + (0.1) \times (\text{Normalized Technical Challenge Score})$ .