

# Technical Design Report: Scoring Rubric

2023 SeaPerch Season

[www.seaperch.org](http://www.seaperch.org)

## Scoring Guidelines:

### Missing Components (0 points)

Requirements missing does not meet minimum requirements.

### Good (1-2 points)

 Always meets basic requirements. Average. (60-75%)

### Mastery (3 points)

Meets all requirements with additional content. (85%) Above Average.

### Exemplary (4 points)

Always exceeds requirements with additional content, material, formatting. Superior (95%)

**TEAM:** \_\_\_\_\_

**JUDGE:** \_\_\_\_\_

**TOTAL SCORE:** \_\_\_\_\_

1. Abstract	0	1	2	3	4	Points
<b>Limited to ½ page</b>	Exceeds page limit.		Within page limit.			
<b>Report summarization</b>	Does not summarize main points of the report.		Includes a basic overview of the report.		Includes a thorough overview of the report.	
<b>Unique ROV design and/or design process</b>	No discussion of ROV design or process.		Overview of design and/or process with some focus on unique traits.		Robust discussion of unique design and process.	

**TOTAL ABSTRACT SCORE (10 POINTS MAX):** \_\_\_\_\_

2. Task Overview	0	1	2	3	4	Points
<b>Limited to ½ page</b>	Exceeds page limit.		Within page limit.			
<b>Overview of the competition tasks</b>	No overview of competition tasks.		Good overview of obstacle <u>or</u> mission course.		Detailed discussion of all tasks for both courses.	
<b>Design approach justification</b>	No discussion of task influence on design.		Basic discussion of how tasks impacted design.		Robust, detailed discussion of design justification.	

**TOTAL TASK OVERVIEW SCORE (10 POINTS MAX):** \_\_\_\_\_

3. Design Approach	0	1	2	3	4	Points
<b>Limited to 2 pages</b>	Exceeds page limit.		Within page limit.			
<b>Team's approach to the engineering design process (EDP)</b>	No overview of team approach to EDP.		Minimal discussion of team's approach to EDP.		Robust discussion of team's strategy to EDP.	
<b>Design iterations</b>	No discussion of design iterations.		Basic discussion of design iterations.		Robust discussion and analysis of design iterations.	
<b>Conceptual drawings and/or graphics</b>	No drawings or graphics.		Includes graphic(s) with basic context within report.		Includes high-quality graphics with context and labels that enhance the report.	
<b>Final design</b>	No discussion of final design.		Basic discussion of final design features.		Robust discussion of final design features and decisions with supporting reasons.	
<b>Novelty of ROV design or approach</b>	No discussion of design or approach novelty.		Basic discussion of design or approach mentions novelty.		Robust discussion and analysis of novelty of ROV design and approach.	
<b>Scientific and engineering terms</b>	No engineering terms.		Includes 2-4 engineering terms.		Includes 5+ engineering terms embedded in text that include context and enhance the section.	
<b>TOTAL DESIGN APPROACH SCORE (26 POINTS MAX):</b>						

4. Experimental Results	0	1	2	3	4	Points
Limited to 1 page	Exceeds page limit.		Within page limit.			
In-water and/or simulated testing overview	No discussion of testing.		Basic overview and/or discussion of testing conducted.		Robust discussion and analysis of testing models utilized.	
Impact of testing on subsequent designs	No discussion of testing impact on design.		Basic discussion of how multiple designs were impacted by testing.		Robust discussion and thorough analysis of testing impact on multiple design iterations.	
Test results	No test results included.		Basic discussion of test results.		Robust analysis of test results supported by graphs and charts.	
<b>TOTAL EXPERIMENTAL RESULTS SCORE (14 POINTS MAX):</b>						

5. Reflection & Next Steps	0	1	2	3	4	Points
Limited to 1 page	Exceeds page limit.		Within page limit.			
Reflection on the design process	No reflection on the design process.		Basic reflection on the design process.		Thorough and thoughtful reflection and analysis of the design process.	
Next Steps	No discussion of next steps.		Basic discussion of next steps for ROV and/or team.		Robust overview of detailed future plans for ROV and team.	
<b>TOTAL REFLECTION &amp; NEXT STEPS SCORE (10 POINTS MAX):</b>						

6. Acknowledgements	0	1	2	3	4	Points
Acknowledgement of support	Not included in report.		Supporters recognized in report.			
<b>TOTAL ACKNOWLEDGEMENTS SCORE (2 POINTS MAX):</b>						

7. References	0	1	2	3	4	Points
<b>References follow APA format</b>	Does not follow APA format.		Follows APA format.			
<b>Includes references to support report</b>	No references or citations.		2 references that are cited in the report text.		At least 4 references that are cited in the report text.	

**TOTAL REFERENCES SCORE (6 POINTS MAX):** \_\_\_\_\_

8. Budget	0	1	2	3	4	Points
<b>Includes itemized budget</b>	Section not included in report.		Section included in report.			

**TOTAL BUDGET SCORE (2 POINTS MAX):** \_\_\_\_\_

9. Fact Sheet	0	1	2	3	4	Points
<b>Includes fact sheet</b>	Section not included in report.		Submitted in approved format.			
<b>Fact sheet content</b>	Required content not included.		Low-res/blurry images and some content included.		Hi-res images and content clearly support report.	

**TOTAL FACT SHEET SCORE (6 POINTS MAX):** \_\_\_\_\_

10. Writing Skills	0	1	2	3	4	Points
Organization and Readability	Report is inconsistent and difficult to follow. Organization severely impacts readability.		Report is easy to follow with some graphics. Each section includes organized discussion.		Report is concise, cohesive, easy to understand and supported by context and graphics.	
Spelling and Grammar	Significant spelling or grammatical errors (5+)		Several spelling or grammatical errors (2-3)		No spelling or grammatical errors.	

**TOTAL WRITING SKILLS SCORE (8 POINTS MAX):** \_\_\_\_\_

11. Paper Format	0		3		6	Points
Follows all formatting guidelines: <ul style="list-style-type: none"> <li>- 5 pages max (excluding sections 6-7 and appendices)</li> <li>- Page size: 8.5"x11"</li> <li>- Margins <math>\geq</math> 0.8 in.</li> <li>- Times New Roman 12pt</li> <li>- Single Spaced</li> <li>- Footer with team name and page # on all pages</li> </ul>	Does not meet all formatting guidelines. Exceeds 5 pages.		Meets most of the formatting guidelines.		Meets all formatting guidelines.	
<b>TOTAL PAPER FORMAT SCORE (6 POINTS MAX):</b>						