

2024 Sea Perch Technical Design Report Guide

Due by 5:00 p.m. on: 3/8/2024
Submit to: SeaPerchNotebooks@gmail.com

<i>Section</i>		Points
1. Abstract (1/2 page)		10
	The abstract is a short summary of the main points in the paper. The paper should primarily describe your unique SeaPerch design and the engineering design process you completed to result in your final design described in the paper.	
2. Task Overview (1/2 page)		10
	In order to design and build a successful ROV, it is imperative to understand the tasks that your team aims to successfully complete. This section should include an overview of the task(s) your SeaPerch will attempt during the SeaPerch Challenge competition. In particular, this section should discuss the characteristics and features of the tasks that affected how you designed your ROV. Avoid directly quoting the course descriptions and instead use your own words to describe what your ROV will do within the obstacle and mission courses.	
3. Design Approach (2 pages)		26
	Given the tasks, describe your team's strategy and approach to developing a novel SeaPerch design. Novelty may occur at various levels of the design and build process including specific components, collections of components, or even team approaches to the process. Focus attention on the creative aspects of your system and how your team conceived of, refined, and implemented these ideas. Describe your experience in making design decisions and how prospective ideas were considered among the team. Include engineering and scientific terms and concepts to demonstrate the team's understanding of the challenges of constructing and operating an underwater ROV.	
4. Experimental Results (1 page)		14
	There is a strong correlation between testing time and competitive performance in the arena. This section should describe various tests accomplished, both in-water and in simulation, as applicable. What were your results in these tests? How did these tests impact your team's subsequent design(s)? Include images, charts, and figures as appropriate to document and demonstrate your results.	
5. Reflection & Next Steps (1 page)		10
	Reflect on this season's experience. What did you learn? Were there aspects of the project that you particularly enjoyed or that challenged you? How do you think that your new knowledge or experience will assist you in future endeavors? This section should also describe various activities and/or tests that you plan to accomplish between submitting this report and the day of competition. What does your team expect to accomplish with these activities? Parts that are 3D printed will be costed out at \$0.05 per gram.	
6. Acknowledgements (no page limit)		4
	Participating in the competition involves identifying resources and support beyond the efforts of individual team members. This support can take many forms, such as technical advice, labor, equipment, facilities, and monetary contributions. Acknowledging those who have supported your efforts is important.	
7. References (no page limit)		8
	As with any technical publication, original ideas and content not generated by the paper's authors should be properly cited. While there are many citation styles, the American Psychological Association (APA) style guide should be used (https://apastyle.apa.org/style-grammar-guidelines/references). Use in-text citations, where appropriate.	
8. Budget (required)		4
	List ALL components included in your SeaPerch design. This information will be utilized during compliance checks at the SeaPerch Challenge and should reflect the total materials cost of your ROV. Add as many rows as necessary to complete this budget. Parts that are 3D printed will be costed out at \$0.05 per gram.	
9. Writing Skills		8
	Organization and Readability along with Spelling and Grammar are important to overall report quality.	
10. Paper Format		6
	It is important to follow all formatting guidelines: 5 pages max (excluding sections 6 - 7 and appendices) Page size: 8.5"x11" Margins ≥ 0.8 in. Times New Roman 12pt Single Spaced. Footer with team name and page # on all pages	