Project proposal for quantify halocline tidal variability in Colvos Passage, WA, with a DIY profiling float

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**Project summary**

**Introduction**

**Proposed research**

**Proposed timeline and budget**

**Timeline**

This project will occur in three main stages. The floating build, data analysis, and paper writing stages (see <https://github.com/cflaim1123/openFloat/blob/main/proposal/timelines/flaimThesisTimelineFull.pdf> for the full Gannt chart project timeline). The float building stage is to occur from 27 September 2023 to 13 December 2023, the duration of the autumn offering of Ocean 443. This stage has 11 components (see Table 1) and is likely to be the most time-intensive portion of the project. The following two stage will occur during the winter 2024 academic quarter.

**Budget**

**References**

**Figure captions**

**Tables**

**Table 1:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project stage** | **Subsection** | **Start date** | **End date** |
| Float building | Concept development | 9/25/2023 | 10/04/2024 |
| Find and order parts | 9/25/2023 | 10/10/2023 |
| Background research | 10/02/2023 | 10/29/2023 |
| Electronics design | 10/09/2023 | 10/21/2023 |
| Electronics build | 10/20/2023 | 11/01/2023 |
| General programming | 10/30/2023 | 11/08/2023 |
| Float testing and deployment without profiling capability | 11/06/2023 | 11/10/2023 |
| Buoyancy engine build | 10/23/2023 | 11/03/2023 |
| Buoyancy engine build | 11/04/2023 | 11/20/2023 |
| Float assembly | 11/20/2023 | 11/26/2023 |
| Final float testing and deployment. | 11/27/2023 | 12/05/2023 |
| Data analysis | Produce desired plots to compare float data to seaglider data | 1/03/2024 | 1/11/2024 |
| Produce salinity transects of Colvos Passage | 1/11/2024 | 1/15/2024 |
| Produce engineering plots to asses float’s performance | 1/12/2024 | 1/16/2024 |
| Paper writing | Follow Ocean 444 assignment deadlines | 1/03/2024 | 3/12/2024 |

1) Concept development 2) Find and order parts 3) Background research 4) Electronics design 5) Electronics build 6) General programming 7) Float testing and deployment without profiling capability 8) Buoyancy engine design 9) Buoyancy engine build 10) Float assembly 11) Final float testing and deployment.

**Figures**