

UNDERGRADUATE RESEARCH PROJECT PROPOSAL GUIDELINES

Dr. Alex Hills Engineering Research Award

Up to \$2000 for Project Expenses plus a \$500 Student Stipend

Engineering Research Proposal: The project should reflect an original research question that will extend knowledge in your area of interest. Your proposal should consist of the following:

1: Dr. Alex Hills Engineering Research Award cover sheet – (Available for download at www.uaa.alaska.edu/ours.) Include the project title, student's name, and student's signature. The faculty advisor's name and signature should be included, certifying that they have reviewed the proposal for content and that the student is capable of performing the research, and that the faculty member agrees to mentor the student for the project.

2: Abstract and Specific Aims (approx 1 page) – A one paragraph summary of the project proposal and a summary of the project goals.

3: Introduction (1-2 pages) – A review of the literature that supports the need for your research.

- **Proposals** should include (a) a statement of the research question, problem and/or hypothesis; (b) a historical discussion of the impacts; and (c) a discussion of present understanding and/or state of knowledge concerning the question or problem.

4: Experimental/Project Design (1-2 pages)

- **Proposals** should include a detailed description of how the research project will be completed including (a) a sampling protocol and/or design plan; (b) the methods and/or procedures to be used; (c) the data reduction and statistical analysis to be conducted or a description of the final form of the product.

5: Anticipated Results (1 page) – Provide the reviewers with a list of the results expected.

- **Proposals** should include an interpretation and explanation of results as related to hypothesis tested. Also, students may want to discuss or suggest further work that may help address the problem they are trying to solve.

6: Project Budget (allow one page for the budget and one page for budget justification) – Include the cost of personnel, supplies, equipment and travel, and a brief justification for each item. Please note the following:

- The student stipend should not be included in the project budget.
- Travel will be allowed only if it falls within the same academic year(s) as your research and there is a direct relationship between the research and the travel being proposed (e.g. for the purposes of conducting research, or to present results at a conference). Funding for travel to a conference will be granted only if the student is accepted to present at that conference.
- Expenses that will not be allowed include:
 - Compensation for the student's time

- Tuition to get credit for the project
 - Amounts for supplies or equipment that exceed reasonable and customary expenses
- Equipment purchased with the grant will belong to UAA after the research is concluded.
- Proposed expenses must be in accordance with UA Policy and Regulation, and funds must be expended as specified in the proposal.
- For this reason, please be as accurate as possible in estimating your expenses. Do not over inflate your budget; conversely, do not underestimate what your actual costs will be.

7: Project References (1-2 pages) – Use the standard convention of discipline including the author, title of article, journal title, volume, pages, and date.

8: Project Timeline – Outline the anticipated dates of completion of various stages of project. For example: When do you anticipate completing background research, fieldwork, lab work, budget expenditures, etc. Be sure to include in this timeline the following dates:

- Mid-April– Presentation at the Undergraduate Research Symposium
- May 31 – Expenditure deadline
- June 15 – Final written report deadline

9: Appendix (up to 2 pages) – student's résumé.