Senior Thesis PROPOSAL Form: Department of Geosciences

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For the **FALL SEMESTER** please fill out this form out and turn in to Sheryl. We recommend that you fill out this Department of Geosciences form first, using the content instructions below. Also, please make your budget proposals identical for both Geosciences and SAFE, despite the differing availability of funds. Geosciences and SAFE will work together to fund your work at the highest possible level based on the merits of your proposal.

1 **Topic**

This section is just the title of your Senior Thesis Paper.

2 **Project Statement**

2.1 **Statement of Thesis (3-6 lines)**

This section should begin with one short paragraph that contains your statement of thesis as a single emboldened sentence. Make your hypothesis clear, and ask yourself: “Is the question I am asking interesting and relevant, and am I capable of testing my hypothesis using the time and resources available.”

2.2 **Introduction (10-25 lines)**

Following this opening paragraph, you should place your thesis in context. Who has worked on this problem before (provide citations to previous work)? What big questions remain? This section can be accompanied with a figure that helps illustrate the problem, and the state of previous knowledge on the topic. Conclude your introduction with a one sentence restatement of your thesis that is now in the context of some of the previous studies others have conducted on your topic.

2.3 **Your Previous Results (0-40 lines)**

Many of you will have completed Junior Independent Research (JP) and/or summer work related to your Senior Thesis. Use this section to describe the results most relevant to your thesis. In many cases, your summer and or JP results will form part of the justification of your Senior Thesis. How well you can explain and make relevant your previous results is a direct measure of how prepared you are to embark on senior thesis work. You should support your text in this section with 1-3 figures illustrating your results. If your JP is not related to your ST project, you can omit this section.
2.4 Objectives & Methods (15-25 lines)

Describe the major lab/computational methods you will use in your research. Additionally, explain the specific objectives for each set of techniques you will employ. In other words, instead of just listing the methods you plan to use, explain why each of these methods is relevant to your work.

3 Itemized List of Expenses

3.1 Budget Justification (15-30 lines)

In this section you should explain clearly why you need the funds you have requested in order to conduct your research. Justify, justify, justify. You will not receive any funding unless it is clear why each expense is crucial for a specific part (do not be vague) of your thesis work. For example, it is not enough to say: “I need $500 for travel to Brookhaven to run two samples on the synchrotron.” You would need to explain what two samples you want to run, why they are important, what data the synchrotron will generate, and how you will use those data to test your hypothesis, what proportion of the funds is for travel expenses, what the actual costs is to run the samples.

3.2 Itemized List of Expenses

Include a table, clearly linked to your budget justification, listing all of your proposed expenses. Research grants are intended to defray the costs of carrying out laboratory, field, or numerical experiments. Requests for funds that enable travel to conferences rarely are granted and will receive consideration only if an abstract already has been accepted for oral or poster presentation and the project has generated exceptional results. Students who may qualify should submit a funding request to the Undergraduate Committee (UGC) including the accepted abstract, a letter from the advisor, and a budget. Final funding decisions will be made by the Undergraduate Committee (UGC).

4 Planned Itinerary (5-15 lines)

This section is your work plan. Support your text with a table or itemized list, explaining when you plan to accomplish each task, and what tools/methods you will employ to meet your goals. Your advisor may choose to use this table to set goals and schedule review meetings with you.
5 Qualifications (4-10 lines)

This section is your chance to explain why you are qualified to undertake this thesis work. What previous course work, lab/field/computer experience, etc., do you have that prepare you for this project?

6 References

Include a complete list of references that you have cited within the sections above. Follow the bibliography guidelines for *Geophysical Journal International* on their website ([http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-246X/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-246X/homepage/ForAuthors.html)) or use the bibliography style file (gji.bst) included with the LaTeX Senior Thesis template ([http://www.princeton.edu/geosciences/undergraduate/](http://www.princeton.edu/geosciences/undergraduate/)).