**M.S. in Earth and Environmental Sciences (quarters)**

**M.S. in Environmental Sciences (semesters)**

**M.S. in Geology (semesters)**

**Thesis or Project Proposal Format**

The work you plan to do to fulfill the thesis or project portion of your degree requirements needs to be described in a proposal, to be approved by the faculty you select to be on your committee. The work is determined between the student and the chair of his or her committee, in consultation with the other committee members. Once the written proposal is approved by the committee, the abstract is included on the second page of the Graduate Plan, and the committee indicates its approval of both the Plan and the Proposal by signing the Graduate Plan. Both are turned in to the Graduate Coordinator, which will advance you to candidacy.

**TITLE OF THESIS OR PROJECT**

**Name of Student**

**Date of Submittal**

**ABSTRACT**

Write this last, after completing all other parts of the proposal. This abstract will be included on page two of your Graduate Plan. It has a 250 word limit.

**STATEMENT OF PROBLEM**

Briefly introduce readers to your research question and clearly state the question you plan to address. You should also explain why your question is interesting, important or otherwise significant. Your question should be one that can be answered by experimentation or other type of scientific investigation. If appropriate, include a figure(s) showing the location of your study area.

**PREVIOUS WORK**

As part of your proposal preparation you will need to do a literature search for prior work conducted on your topic, and you will need to read and understand the results of that prior work. In this section of your proposal, summarize what other investigators have discovered about this topic, and how your work will be related to theirs. How does your work build on work done previously by other investigators? What is new about your project? Cite your references using American Chemical Society style (ACS; PSM Option) or Geological Society of America Bulletin style (GSAB; Geology Option) format. These will be the formats you will follow throughout your program.

**METHODOLOGY**

Explain the field and/or lab techniques that you plan to use. Explain what data you plan to collect in order to test your hypothesis and how you will go about collecting those data. Explain what your hypothesis predicts you will find, and how you will know whether or not your data support your hypothesis. (i.e., think through what you expect your data will look like if your hypothesis is true and what your data might look like if your hypothesis is not supported).

**TIME LINE**

Think through what you need to do for this project, how long each step will take and set up milestones for yourself. For example: Weeks 1-2: collect field data; Weeks 3-6: run lab analyses; Weeks 7-12: analyze and interpret lab results and create figures for paper; Weeks 13-16: write text of paper. While these are estimates, they must be reasonably realistic.

Include in your time line the relevant information requested below:

If you are undertaking fieldwork, approximately how many days fieldwork will be undertaken?

If you are collecting, or working with samples already collected, how many samples do you propose to work on?

If you are undertaking laboratory work on the samples noted above, what exactly to you plan to do with the samples? Be specific as to procedures and numbers of samples being affected by each procedure.

If you are undertaking laboratory work on samples, how long do you expect to take on each activity noted above?

Total time estimated for each sample.

Total time estimated for all samples.

**BUDGET**

Include an itemized estimate of the costs associated with conducting this work. If a source of funds has been identified (e.g., your professor’s grant), indicate this. If funds are needed, indicate from where you plan to request funds.

**REFERENCES CITED**

List the sources of information that you used in your proposal. Use the citation format used for ACS or GSAB. Only list published papers that are specifically cited within the text, figure captions, and tables of your proposal. Please note that ACS is flexible, providing three reference citation formats. You may choose any of these, but be consistent in following one of those three.

**Figures and Tables:**

Any figures included in your proposal must have a caption, written in your own words, that explains the significance of the figure in the context of your proposal. If you did not create the figure yourself from scratch, you must cite the source from which you obtained the figure. If you construct a figure or table using other peoples’ data you need to cite the source of the data. Each table should have a descriptive title, e.g. Table 1 - Data Samples Collected. Figures and tables should be appended at the end of the proposal, following the references cited. All tables and figures should be numbered consecutively in the order in which they are referred to in your text, e.g. Table 1, Table 2, Figure 1, Figure 2. Any map, graph, diagram, sketch, photograph or other visual representation should be called a “Figure”.

**Other guidelines for proposal preparation**

Draft proposals must be double-spaced so as to allow room for your committee to make comments and corrections.

* The final proposal may be either single spaced or double spaced.
* Use one inch margins; 12 point font throughout (any reasonable font can be used, Times is usually a good one); number pages in upper right corner; left justify only.
* Use the headings suggested above to make the sections of your proposal clearly identifiable, using the following format:

**FIRST LEVEL HEADING** – all caps, bold face, flush left

**Second Level Heading** – title case, bold face, flush left

***Third Level Heading*** *–* italics, bold face, flush left

You are writing a scientific proposal, take a look at articles in appropriate journals and textbooks for scientific writing style.

Written language is different from the spoken language. Pay attention to proper grammar and do not use slang words or contractions.

Proof-read your paper, in addition to using spell-check. Spell checkers do not catch everything. It is a good idea to have one of your colleagues proofread it as well, as a different set of eyes is very useful at catching things the author misses.

**Plagiarism**: Using another person’s writing or ideas and passing them off as your own (New Webster’s Dictionary, 1967) is dishonest and unethical and therefore forbidden. That means that you cannot use an author’s description and copy it verbatim in your proposal without properly referring to him/her. You can use another person’s work, as long as you make it clear that it is not your own. See below for procedures for correctly referencing your sources.

**Citing your sources:**

You can use another person’s work, as long as you make it clear that it is not your own, by making reference to the original source of the information. In scientific papers and proposals this is usually done in one of two ways:

1) By putting the quoted material between quotation marks, e.g. “I am not a crook”, said Richard Nixon.

2) When you have summarized the work of another author **in your own words**, you refer to him/her by putting the name and year of publication between parentheses.

For example (these are GSAB format):

a) Gypsum has a hardness of 2 on Mohs Scale of Hardness (Klein and Hurlbut, 1993).

b) Neese (1991) calls the immersion method by far the most convenient.

c) Mattioli et al. (1996) developed a hazard map for Mt. Pelée, Martinique.

d) The Arecibo quadrangle was mapped by Briggs (1968).

e) Precursor seismic activity at Pinatubo was very intense (Harlow et al., 1996).

Note that for sources with two authors, both authors are given. For sources with more than two authors, only the first author’s name is given, followed by “et al.” (meaning, “and others” in Latin). Also note that the “al.” in “et al.” is an abbreviation of a longer Latin word and thus has a period at the end of it.

At the end of your paper give the list of references **used in the text** in alphabetical order using the same format used the ACS or GSAB.