GG 710 - Remote Sensing in Submarine Environments
Class Project

Your class project will be written in the form of a proposal, almost identical to the type of
document that you would submit to the National Science Foundation for funding. You will need to
conceive a research project that you believe you could carry out using AT LEAST TWO of the remote
sensing instruments that we discuss during the semester. Science should be the main emphasis of the
proposal, but you will also have to justify your choice of instrument and the survey strategy. You are
encouraged to seek guidance from your advisors if you think there is a possibility that this project could
turn into something that you/they might want to submit to NSF.

(The following is paraphrased from NSF's Grant Proposal Guide)

THE PROPOSAL

The proposal should present the (1) objectives and scientific significance of the proposed work;
(2) suitability of the methods and instruments to be employed; (3) qualifications of the investigator and
the grantee organization; and (4) amount of funding required.

Proposals should be assembled in the following sequence:
1. Cover Sheet
2. Project Summary
3. Table of Contents
4. Project description (including justification of instrumentation)
5. Bibliography
6. Curriculum Vita
7. Budget Justification
8. Budget

Project Summary

Your report must contain a summary of the proposed activity suitable for publication that is not
more than one page in length. It should not be an abstract of the proposal, but rather a self-contained
description of the activity that would result if you are lucky enough to get funding. The summary should
be written in the third person and include a statement of objectives, methods to be employed, and the
significance of the proposed activity to the advancement of knowledge.

Table of Contents

A table of contents is required and should show the location of each section of the report as well
as major subdivisions of the project description and the methods and procedures to be used.

Project Description

The main body of the proposal should be a clear statement of the work to be undertaken and
should include: objectives for the period of the proposed work and expected significance; relation to
longer-term goals if appropriate; and relation to the present state of knowledge in the field, to work in
progress by you, and to work in progress by others. Outline the general plan of the work, including the
broad design of activities to be undertaken, a description of the instruments and procedures, and, if
appropriate, plans for preservation, documentation, and sharing of data, samples, physical collections, etc.

The project description must be greater than 10 pages by may not exceed 15 pages in length (30
double-spaced pages are okay by us although they are not acceptable to NSF). Conformance to these
page limits will be strictly enforced! At NSF, they send your proposal back to you without it being reviewed - you can probably guess what grade that will translate to in this class. Visual materials,
including charts, graphs, maps, images and other pictorial presentations are in these page limits. Pages should be standard size (8.5” x 11”) and should have 1” margins all the way around the page with type no smaller than 12 point font size.

**Bibliography**

You should know how to put one of these together by now. Note that the references are not included in the project description page count.

**Curriculum Vita**

Here's a good opportunity to put your resume together if you haven't already. Please limit your CV to two pages. If this project is a collaboration between yourself and your advisor, please include their CV as well.

**Budget and Budget Justification**

Note that the justification, which should be no more than one page long, comes before the budget. Please don't spend too much time pulling your hair out over the financial details; however, it will be useful for you to learn just exactly how much the instruments we are so casually discussing in class cost to use. Since most of you will be proposing to undertake some sort of field program, your budget should cover at least a 2-year period. Three years is usually preferable at NSF for field programs.

**Timing**

Our previous course evaluations indicate that despite warning students to prepare these projects early, little is done until the very end of the semester and then everybody really gets stressed trying to get their proposals finished for this class. (Ironically, this “panic mode” style of proposal preparation is similar to how many of us get funding in real life…). To avoid frustrating you in this iteration of the class, we will set a series of deadlines for various parts of your proposal during the semester to help defray the amount of work required at the end of the semester. *The first project deadline involves a short pre-proposal describing some scientific problem that you would like to investigate. It is due on the morning of the 5th lecture.*

**Formatting**

Please use the project for this course as an excuse to log into NSF’s website and check out Fastlane, [https://www.fastlane.nsf.gov/fastlane.htm](https://www.fastlane.nsf.gov/fastlane.htm), which allows electronic submission of proposals. You would need permission from UH's sponsored research office to actually prepare a proposal on Fastlane, and we don't want to get into that level of bureaucracy for this course, but there are materials, such as a PDF of the Fastlane Proposal Preparation and Submission Guide, that you will need to know intimately if you plan to undertake academic research in the future. If you need templates for budget forms, CV's etc., let me know and I will either bring examples to class for a brief discussion, or I will give them to interested parties individually.