THE NOTEBOOK
Your notebook will contain two major sections for:

1. Assignments accomplished in class
2. Class project

In each of these sections I expect to see DATED materials that include things like plots, images, printouts of scripts that you build, your assessments of various techniques, etc. You may also include your class notes if you wish. Your assessments and the dates don’t need to be typed (but they do need to be legible to me). The reason you’ll be putting dates on your pages is so that we can both make certain that you are keeping up with the work in class and applying it in a timely fashion to your project dataset(s). Think of this notebook as a long-term resource for YOU that you will use five years from now when you go out to sea – anything that you’d find useful to that end can get put into the book. In the event you’re a minimalist kind of person, then you should think of this notebook as a resource for ME since I need to give you a grade by the end of this semester. If you include notes that you take during class, I won’t be reviewing them at all.

Notebooks will be handed to me at the end of class on the last Friday of every month. I will review your materials and return the notebooks to you at the beginning of the following class.

IN-CLASS ASSIGNMENTS
During our Friday meetings I will provide various datasets throughout the term for you to decipher, massage, analyze and display using different tools. The types of data that we will explore together will come from many of the sensors that we discussed in class last semester, basically instruments that are used for remotely sensing the oceans. The tools will largely come from a pool of publicly and commercially available software packages, but you will also learn how to develop some basic tools yourself using UNIX building blocks. Typically you will be given several ways to process a particular dataset, and you will be expected to write up a short assessment of how well various techniques worked. Due to the fact that you folks have a broad spectrum of experience with data processing techniques (from novice to expert), it is possible that some of you will finish quickly and be ready to leave early (which you may) while others may have to continue working on “in-class” assignments after our time in the computer lab is over. If you find yourself frequently having to spend extra time to complete in-class assignments, please come see me.

CLASS PROJECT
Data
Your class project will involve a dataset you pick (or supplied by the me if you don’t presently have a dataset available). This dataset can come from any type of remote sensing system (or systems), as long as it is sophisticated enough that you can apply several of the techniques that we discuss in class to it. Examples include bathymetry and sidescan data (and accompanying navigation) for the Arctic Ocean, a digital terrain model and imagery for Kailua Beach, etc. If you aren’t sure whether the dataset(s) you are considering are acceptable, please come see me.
**Processing, Display and Analysis**
You are expected to apply many of the techniques that we discuss in class to your datasets and write assessments of the results. You shouldn’t waste time applying techniques that we determine won’t work; for example, I will show you in class why it’s a bad idea to average overlapping swaths of sidescan data in a grid, and I will expect you to learn from that experience and not repeat the process with your own datasets. On the other hand, if we discuss median filtering for bathymetry, you should attempt the approach on imagery just to see what happens to your data. You are also encouraged to explore techniques on your own, especially for data display. Want to emphasize a certain area in your figure? There are myriad ways to do this, some of which we will discuss in class, others that I hope you will find on your own.

**Interactions with other students**
Because you will all have unique datasets for your projects, I encourage you to share and discuss your results with each other outside of the classroom. Similarly, because I have to move at a steady pace to make sure that we get through the lectures, if you are having difficulty you should feel free to approach your neighbor for help. If I can tell that you are really having problems I’ll try to jump in and help too – let’s not let anybody get very far behind the rest of the crowd.