

The remainder of this file based on the actual syllabus for the current trial version of the course, which is being offered as GEOS 692. The trial course was developed collaboratively by Freymueller and graduate student Ronni Grapenthin – in fact, the course was Grapenthin’s brainchild. The results of the trial courses have been significant enough that we aim to integrate it into the curriculum as a formal course with a permanent instructor. More information about the course is available online:

<http://www.gps.alaska.edu/programming/>

The 2010 version of the trial course is also online:

[http://www.gps.alaska.edu/programming\\_2010/](http://www.gps.alaska.edu/programming_2010/)

That version includes the lecture presentations in PDF format for the entire semester, as they were delivered in Fall 2010. A 2009 version is also available. Some selected material is included in PDF form. The trial course was not stacked and was offered pass/fail. One undergraduate took it in Fall 2011, which was useful in helping calibrate expectations. The syllabus here has been modified from the originally submitted version to better develop the stacked undergraduate version of the course and to incorporate feedback from the Faculty Senate. The main changes were to be more specific about the expectations for project, and to make a clearer separation between the work assigned and expectations for undergrads taking it as 436. Flexibility in the project is beneficial for the students, so keeping that is important. The students are more excited about the project and learn more when it is directly helping them do something they need to do for their research. That means there are many styles of projects, and these have been listed now in the syllabus so students can see what the expectations are. My hope is that they will do more than the minimum because that advances their research, but that is up to them. The structure of the lab and homework assignments is not conducive to having undergraduates do different or simpler assignments or only do a part of each assignment, and in reality there is no reason they should not be able to do these as well as the grad students. So the main difference is that the undergrads have a much simpler final assignment, which is just to present something they have done in the lab rather than to do independent work lik

*"Programming is legitimate and necessary academic endeavor."*  
[Donald E. Knuth](#)

**Instructors:**

Ronni Grapenthin  
Geophysical Institute  
University of Alaska Fairbanks  
903 Koyukuk Drive, P.O. Box 757320  
Fairbanks, Alaska 99775-7320  
office: Elvey 413H  
hours: by appointment  
email: [ronni@gi.alaska.edu](mailto:ronni@gi.alaska.edu)  
phone: +1 (907) 474 – 7428

Jeff Freymueller  
Geophysical Institute  
University of Alaska Fairbanks  
903 Koyukuk Drive, P.O. Box 757320  
Fairbanks, Alaska 99775-7320  
office: Elvey 413B  
hours: by appointment  
email: [jeff.freymueller@gi.alaska.edu](mailto:jeff.freymueller@gi.alaska.edu)  
phone: +1 (907) 474 – 7286

**Overview:**

*we are lazy people*

[machine](#)

[person](#)

*your*

*automate an intellectual challenge that has been*

*solved*

**What it is not:**

**Prerequisites:**

**Textbook:**

**Student Learning Outcomes:**

**Grading:**

*Graduate Students*

**Labs+Homework+Project Presentation**

**70% of total**



**Policies and makeup-labs:**

<http://www.uaf.edu/catalog/current/academics/regs3.html>)

**Schedule:**

