Advanced Computing Techniques in Meteorology

ATMS 373–001
SPRING 2009

Computer skills are often a pivotal factor in hiring decisions in the public and private sectors, as well as in the success or failure of graduate students in the atmospheric sciences. This course covers some advanced computing skills that are especially relevant to work in the field of meteorology. In the next few months, you will become familiar with several programming techniques and software packages that will help to transform you into an efficient researcher and a profitable employee.

PROFESSOR

Dr. Christopher Godfrey
Office: Robinson Hall, room 231
Phone: 828-232-5160
E-mail: cgodfrey at unca dot edu
Office hours: 10:50 a.m. to 12:05 p.m. (with priority to ATMS 373 students) and 1:45 p.m. to 2:30 p.m. Tuesday and Thursday, or by appointment. If my door is open at any other time, please drop in.

CLASS INFORMATION

Meeting times: TR 10:50–12:05 p.m.
Location: Robinson Hall, room 238
Required text: None.
Prerequisites: ATMS 103 or 105; CSCI 142 or 201
Website: http://facstaff.unca.edu/cgodfrey/courses/advcomp/

GETTING QUESTIONS ANSWERED

Note that my office hours coincide with the class meeting time. Since this is a Web-based course, you need not attend class, but I will be in my office during this time to assist you. You have priority during our class meeting time, but you may also visit during my afternoon office hours. If at any other time you have a question and my office door is open, you are more than welcome to visit. Otherwise, e-mail is the best way to reach me and I check it often. You may also schedule an appointment with me. You *will* run into programming problems and need to ask questions, so please don't hesitate to ask.

COURSE TOPICS

Topics include an assortment of tools used for meteorological applications. You can expect to learn GrADS, basic HTML, and CGI scripting and create postscript and raster graphics, all with the help of the Python programming language, use LaTeX for document preparation, and manipulate data using a variety of options.

COURSE FORMAT AND EVALUATION

There are no lectures, quizzes, or tests. There are only tasks and a final project. You will submit these assignments for assessment by sharing it with me via a password-protected directory on your Web site. The requirements for an A include the satisfactory completion of the final project and 7 tasks. Satisfactorily completing 6 tasks with no final project will earn you a B and the satisfactory completion of 4 tasks with no final project will earn you a C. To earn any of these grades, you must build a Web site with a password-protected directory. Please do not traumatize yourself with anxiety about the final project. You may find that it flows naturally as a creative extension of one of your assigned tasks. Please allow me to approve your plan for the final project before proceeding. You may collaborate on the assigned tasks so that you may learn and copy from others and extend their work, but please acknowledge the work of others. For example, "This course originated from Dr. Brian Fiedler at the University of Oklahoma and has been modified for use at UNCA with his permission."